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THE CARE AND TREATMENT OF CEREBRAL PALSIES

WINTHROP MORGAN PHELPS, M.D.

BALTIMORE

The care of cerebral spastic paralysis is a rather general problem in which the orthopedic aspect is the biggest single factor, but orthopedic measures alone will not in many instances accomplish the desired results. The problem deals with a deviation from the normal which has existed since birth in most instances. This particular factor differentiates the paralysis from acquired conditions. When one considers the motor side alone, it is easy to see that primary action patterns such as alternation of the legs and function of the reach and grasp may not be automatically developed. Likewise, the ability to suck and to swallow and the primitive throat and tongue motor patterns, from which speech originates, may not have been developed. The relationship of these defects to the total picture of the intelligent person is the problem. All teachers are insistent on a thorough knowledge of fundamentals in any teaching problem. In the case of spastic paralysis the absence of physical fundamentals makes subsequent teaching unsuccessful unless thought and care are given to all the fundamentals which may be lacking in the original development.

It is necessary to determine what must be the aim of treatment. A broad statement is that the object is to make the child fit the groove of normal humanity. "The groove" is a vague concept of the type of behavior which is expected of the average person. Physically he walks without a limp, he speaks in a certain way and the way he uses his arms is dependent on the apparatus with which he is surrounded. He laughs only in moderation; he does not cry publicly. There are definite racial and national behavior habits. The fiery Italian, the stolid Indian and others show apparently national characteristics, and the behavior of the individuals of each race is normal for them but not for other races or nationalities. Even differences in methods of walking can be demonstrated, and the excessive use of the arms in gestures is familiar to all. The greatest national or racial difference is in speech. Some languages lack entirely the sounds which are common in others. A foreigner speaks with an accent which is a definite handicap when he is transplanted to a nation with another language. When a member of any race or nation is transplanted he seldom automatically fits the groove.

DETERMINATION OF MENTAL DEFICIENCY

The person who is handicapped from birth is further from the groove of his particular race or nation than is any one else. The problem is a many sided one which no one person is trained to solve, because the various points of view cannot be satisfactorily attained by one person. The gait of a child and his emotional behavior are apparently not very closely related, but in making him a normal human being one is as important as the other. The child must be measured against the theoretic normal from all points of view. The commonest measurement is the determination of the mental age by the Binet scale or some similar system. The mental age, however, is far from the only age which must be measured in the child handicapped from birth, as it is impossible to determine exactly what limitations the complicated handicap may impose. He must also be measured physically, so that the percentage of the ability to move at a given age as compared to that of the normal child will be known. He should also be measured from the point of view of his social competence. Doll and his co-workers in Vineland, N. J., have evolved a scale of social competence for measuring the social age, and this is important in connection with the child with spastic paralysis.

Because the centers controlling laughter, crying and the other motor pictures accompanying emotion may be affected, the child's emotional age should be determined so far as possible. Definite attention must be given also to his interests and aptitude, since the handicapped child is likely to develop unevenly because of inability to enter into the normal activities of other children of his own age.

It is only after all these measurements have been made that it can be determined whether definite mental deficiency is a part of the picture.

The brain is such a complicated mechanism that it is impossible to imagine two injuries which would be alike. The division in general of motor injuries to the pyramidal system and motor injuries to the extrapyramidal system is very important as a factor in determining where the lesion is in the brain. The location of the lesion should have some bearing on the probability or the lack of probability of mental deficiency. If it can be determined, as it sometimes can, that the injury is at the base of the brain and that the cortex of the brain is not involved in any way, it is difficult to explain true mental deficiency as a result of the injury. A differentiation must, of course, be made between true mental deficiency and retardation on the basis of the handicap.

Often the true underlying situation can be determined only by a test of teaching; if the child can be made to progress and learn at the rate of a year per year, then obviously true mental deficiency is not present; instead, the ability to learn by the usual methods is blocked by some part of the handicap, and special teaching methods are necessary.

CEREBRAL PALSY

The distribution and the number of persons with cerebral palsy throughout the United States are not clearly known. A few surveys have shown that the number is greater than the number of persons with infantile paralysis, while other surveys have shown that it is somewhat less. Apparently the conditions are almost equally frequent. Many of the subjects are in institutions for the feebleminded; many others are homebound, and a certain number, which appears increasingly large, are being taken care of in the public schools. Still another group may be found in the private schools for defective children, the membership of which is often composed largely of such children.

The percentage of these children who are truly feebleminded is not known, but the percentage who are mentally normal but suffering from retardation due to the handicap is apparently greater than the actual number of feebleminded. As methods of teaching are developed, the number of supposedly feebleminded children is decreased still further.

The majority of the children are suffering either from congenital malformation or maldevelopment of the central nervous system or else from an injury that occurred at about the time of birth. Actual obstetric injury is found to play a comparatively small part. By obstetric injury is meant damage to the child due to poor handling of the obstetric problem. Two general types of injury may cause cerebral palsy: first, damage to the cortex of the brain, which most frequently results from malplaced or too tightly placed forceps, and, secondly, injury to the base of the brain resulting in a hemorrhage into the basal nuclei from a tear of the tentorium and the vein of Galen, as a result of too strong traction and stretching of the neck, which has been demonstrated by Crothers. The first type of injury, the cortical type, produces definite spasticity, while the second type of injury, the basilar type, produces athetosis, tremor or incoordination of some sort.

SPASTICITY AND ATHETOSIS

With a congenital defect, as compared to an injury received at birth, it has been shown that there may be a congenital anomaly or deficiency in the cortical or pyramidal system, resulting in spasticity, or a definite abnormality or absence of part of the basal nuclear mechanism, resulting in athetosis, tremor or incoordination.

The third chief cause of cerebral palsy is the damage produced by encephalitis, and in some postencephalitic patients the damage is essentially that which produces spasticity and in others essentially that which produces athetosis. One is therefore dealing with a triple cause, namely, congenital malformation, injury received at birth and postencephalitic manifestations. One is also dealing with two resulting conditions: first, spasticity and, second, athetosis or involuntary motion. It was formerly supposed that the combination of these two conditions is frequent, but on careful study it was found that, although the combination does occur, it is comparatively rare. A possible mechanism of its occurrence, for example, is extremely rapid birth of a premature child. The walls of the blood vessels are perhaps not as strongly developed as they would be if the child were born at term, and the sudden release from the greatly increased pressure within the uterus to the comparatively low pressure of the air outside can produce petechial or multiple hemorrhages in the brain which result in a condition similar to the "bends," or caisson disease, and in diffuse damage to the brain, with perhaps a mixture of spasticity and athetosis, depending on the distribution of the hemorrhages. It is necessary to make a clear differentiation between spasticity and athetosis, however, because the treatment of the two conditions is very different. If one thinks of spasticity as stiffness of muscles and athetosis as involuntary motion, the greatest difference can be seen between them. However, the results produced when the child attempts to move are sometimes so confusing that the difference is indistinguishable at first sight, as the spastic child in attempting to move brings about the stretch reflex, which causes contraction of other muscles involuntarily, but secondarily to the attempted motion, and results in incoordination. The athetoid child, on the other hand, has involuntary motion before he attempts to make a voluntary movement and attempts to stiffen the muscles or contract them strongly in order to control this involuntary motion. The effect looks like spasticity and also results in incoordination. It is sometimes difficult to determine which condition is being dealt with in less than several hours of study of a given patient.

The neurologic examination, of course, should be entirely different for the two conditions. In the first place, if a pyramidal condition, or true spasticity, is present there should be hyperactive knee and ankle jerks, a positive Babinski sign, occasionally ankle clonus, diminished or absent cremasteric and abdominal reflexes and hyperactive biceps, triceps and periosteoradial reflexes. These changes are characteristic of damage to the pyramidal system and should be found. In the case of athetosis, on the other hand, or extrapyramidal disturbance of any kind, the reflexes should be essentially normal. That is, the knee jerks and the ankle jerks should be normal. A Babinski sign may be present. The reason for this is not clearly understood at the present time, although there are many theories. The cremasteric and abdominal reflexes and the arm reflexes should be normal.

Great care must be taken to determine that these tendon reflexes are really normal, however, as it is easy to mistake a reflex that is being reinforced automatically by involuntary motion for a true hyperactive reflex. It is only by eliciting the reflexes over and over and finding that they are normal part of the time that a true diagnosis of extrapyramidal dystonia can be made.

The necessity for differentiating these two conditions has been emphasized because not only is treatment of the two conditions different but the general characteristics of the spastic subject and of the athetoid subject differ widely. The patients respond to situations in a different manner, and their behavior is different under similar circumstances.

When there is speech involvement, the type of speech defect is entirely different. With spasticity the defect is rather uniform, and the type of speech utilized by truly spastic subjects can be learned easily by those working with them to any extent. It is due, of course, to definite spasticity in some part of the speech mechanism, and the result is speech that is defective but in definite ways. In the athetoid patient, in whom involuntary motion is the primary difficulty, the speech is upset by the involuntary motion of the tongue, for example; and as the involuntary motions never coincide with the voluntary ones made on the patient's attempt to speak, the words never come out distorted

in the same way but on repetition are spoken a different way each time. No amount of attempting to say the word over will result in improvement, as the word will be distorted in a different direction on each trial and the patient will finally give up the attempt entirely. On the other hand, repetition and training of this sort in cases of spasticity produces clearly defined improvement.

This point is brought out for the purpose of showing one of the definite differences between the two types. It can be said that throughout the entire treatment repetitive methods are of definite use for spasticity but are of no avail for athetosis, as with the latter attempts to carry out definite repeated activities in speech or in the use of the arms or legs are doomed to failure. This difficulty is carried over into the mental and general life, and repetitive methods have been found to be generally unsuccessful in all lines in the teaching of athetoid children. It is important that the differences in behavior and in methods of training be known by all who come in contact with such children not only in the orthopedic field but in all fields in which attempts are being made to improve them. Studies are being made at the present time on the differences in the behavior of the athetoid and of the spastic child which should be very enlightening when completed.

PLAN OF TRAINING

It can be seen that the training of such children is a general problem and involves the orthopedic, psychologic, speech and educational fields. The activities must be so interrelated that the therapist in each field knows clearly what is being carried out in the other fields.

In the educational field, in the teaching of normal children a definite course has been set up. This begins with fundamentals, and the various branches are brought in at certain ages. Thus "the three R's" are taught in the first grade, whereas such things as economics, languages and political science are brought in at entirely different points in the education. The times at which these subjects should be taught have been to some extent decided on. In the case of the child who has been crippled or handicapped in speech and action since birth, a similar regimen must be set up to care for the physical and motor side and to parallel the mental educational system.

Obviously, fundamentals must be stressed first, and in this instance fundamentals represent primary motor activities. No reliance must be placed on what are generally considered automatic instinctive activities. The young animal is able to walk if not on the day of birth at least within a few days, because of the automatic application of alternation in the legs in muscular contraction. This alternation can be seen in the human being in the kicking motion which babies normally carry out very early. However, if a part of the motor mechanism which controls alternation is interfered with, alternation will have to be taught as a voluntary function and trained into the habitual level before any attempt at alternate progression of the legs can be made.

In the spastic child this difficulty is often met, but it is interesting to see that even with the spastic baby alternation can be taught and trained into a habit. In the athetoid child, on the other hand, the primary ability to move is undisturbed, since the damage does not lie in the pyramidal or voluntary motor system, but the activities are hampered by the superimposition of involuntary motion, which steers the voluntary attempts in the wrong directions. Thus even the fundamentals which must be taught to the spastic and to the athetoid child are entirely different. If a normal person attempts to write on a piece of paper in a rapidly moving automobile on a rough road, his instinctive reaction is to steady himself by tensing the arm and body. This tension however will result only in worse writing, as all the jolts produced by the automobile are thus much more forcefully transmitted to the hand. If, however, the person attempts to loosen up completely and relax, all the joints act as shock absorbers and the writing is much improved.

The athetoid child reacts to his involuntary motion by voluntary tension, and after a number of years the tension habits become so fixed that he cannot make any motion without bringing in extreme stiffness. His habits must be unlearned in order to bring about a diminution of the athetosis. Athetosis disappears during sleep, and the amplitude of the involuntary motions decreases greatly with relaxation and increases with increased tension. Through the teaching of extreme relaxation the amplitude of the involuntary motions associated with athetosis can, in many cases, be so reduced as to be almost negligible. It is possible to teach relaxation by special methods to very young children and even to babies, and once the subject has realized the advantages of being relaxed he can substitute a habit of relaxation for one of tension, and improvement can go on more rapidly. It is therefore not necessary, for example, to teach a truly athetoid child alternation exercises of the legs, since the mechanism for alternating motion is essentially pyramidal and is not disturbed but only blocked by the athetosis. Repetition of alternate motions of the legs passively, as in bicycling, is of use in the case of spasticity and in itself will bring about habitual alternation. In the case of athetosis, however, no amount of repetition will do any good unless attention is first given to relaxation, and when relaxation has been accomplished the alternation will be normally present.

Another phase of the problem which must be considered before a treatment unit is set up is the distribution of the involvement in the individual case. Is the child most in need of being taught to walk or are the problems of speech or of use of the arms more important? A great many children are seen who have been the rounds of many physicians and on whom a large amount of the time has been spent on operations and treatment for the legs although the arms and the speech are practically useless. Of course the problem is relatively simple when the child has spasticity or athetosis involving the legs alone. The attention of course should then be centered on teaching him to walk if possible and on improving the use of the legs. However, when the legs and likewise the arms are useless, the question of future walking is much dependent on the development first of the proper use of the arms. The balance sense is usually badly disturbed, and it is necessary for the child to use a crutch or a wheelchair for a period before attempting free walking with the legs and obviously if the arms are useless they cannot help in balance, and the use of crutches is out of the question. It is important to have a clear realization that this stage must be carried through before walking can really be accomplished. This fact is too often forgotten. In the case of a severely handicapped child who has no use of the arms or legs and little or no speech, it would seem that the most desirable improvement to begin with would

be to obtain speech, so that communication could be carried on more freely and normally between the patient and those around him.

The attitude of the family is often interesting. In such cases as the one just described I have seen the members of the family insist that what they wanted was to have the child taught to walk, while it was at the same time necessary for them to do the dressing and feeding and to interpret the child's poorly developed sign language for communication.

The distribution of the handicap in the patient is important from another standpoint also. It is necessary to consider the education of the diplegic child with normal arms from an entirely different point of view from that of the hemiplegic child who has only one bad leg but also one useless arm. There are many occupations for the person whose arms are normal which can be carried out while he is sitting in a chair. It is necessary only to make him independent, so that he can go to his place of occupation. But when one arm is involved the problem is much more complicated. It would seem important to carry the education of the hemiplegic patient far beyond that of the diplegic patient, as the gainful activities are so much more limited for the latter than for the former.

In determining the proper regimen and method of treatment, therefore, one must determine first what the various age levels are. That is to say, the mental level, the level of physical ability, the emotional level and the level of social competence. The distribution of the handicap must then be considered and a decision made as to whether the work is to be concentrated on walking, use of arms, speech or a combination of these functions. The degree of the handicap should then be roughly determined. It is customary to classify it simply as severe, moderate or mild. In the case of the child who is seen during babyhood, that is to say, in the first year of life, the three particular fields in which treatment should be carried out are, first, development of simple motor coordination; second, behavior control, and, third, the simplest control of psychologic reactions to situations.

TIMING

A great deal can be gained by starting treatment in these fields very early. The sooner the child is able to find out that a special regimen is necessary in order to make his body work for him, the less unteaching of bad habits of action will have to be utilized. During the preschool period, that is, between the ages of 2 and 5 years, the speech work should be begun. It is useless of course to attempt to teach speech to babies under 1 year old. They learn gross motor coordination involving large joints, such as the hips, the shoulders and probably the elbows and knees, comparatively easily, but little should be done at this stage with regard to the fine coordinations, which are not normally developed in the child until the primary school age has been reached. In the preschool child, behavior is very important. It is necessary that he be much more responsive to disciplinary measures than the normal child, as the effort and the necessary obedience to make him carry out the corrective measures is important. It is during this age that walking should be started if it is to be attempted.

The teaching of these functions is begun at these ages because there is apparently an optimal age for the different activities. In other words, it has been seen that, if a child reaches the age of 5 or 6 before he is taught to speak, the attempt to teach him to speak is much more difficult than if it is started during the period when he would normally learn to speak. This of course applies not to the child who is mentally retarded but to the child in whom the lack of speech is entirely due to the handicap.

The situation with regard to walking is the same. The normal child learns to walk before the age of 2. It is advisable, therefore, whenever possible to try to bring about walking during this period, as it will be much more easily accomplished. The reason for the greater difficulty in accomplishment of walking by an older child is obvious, as, when the body becomes larger and the child taller, the falls which the child takes when attempting to walk are much more painful and he is more likely to be hurt; but the optimal period is apparently also a factor in this particular activity.

When the child has reached the primary school age the motor reeducation should parallel the type of education which he is receiving at school. In other words, the finer motions of the hands and feet should be developed and the finer coordinated sounds of speech should be worked on particularly. It is necessary at this age to give considerable time to the question of behavior and psychologic adjustment to other children. Previous to this age the child is happy playing essentially by himself, but when he reaches school age group play becomes a more important factor. It is well to develop this if possible, as the handicap in many instances tends to work against it.

As the child becomes older the various activities become more skilled in type. For example, the child at the early primary school age spends a great deal of time playing games such as hide and seek and tag, which require little or no skill. After two or three years he attempts to roller skate or to skip rope, and a gross type of skill is developed. It is necessary to parallel this type of skill in the handicapped child who has reached that age. The idea of the optimal time for different types of activity should carry through the entire training period. It can easily be seen that types of skilled motion which are not learned by the normal child at a given age should not be taught the handicapped child before he has reached the age when he should acquire these skills naturally.

The actual method of treatment, as I have said before, differs markedly for the spastic and for the athetoid child. In the case of the spastic child the fundamental principle is that the spastic muscle contracts maximally to any stimulus applied to it. The most commonly applied stimulus is the stretch reflex. This is brought about by the voluntary contraction of the antagonist of the spastic muscle. An attempt to extend the arm in the case of a spastic flexor would result in an immediate contracture of the flexor, which would block the motion.

An examination of the muscles should be done in each instance to determine the distribution of the spastic muscles. It will be found that in each spastic extremity there is a spotty or unrelated group of muscles which show the stretch reflex. These can be charted as the spastic muscles. Another group of muscles will show normal contractility, and when an attempt is made to move the muscles passively against their direction of contraction no stretch reflex will be found. These muscles can be charted as normal. A third group of muscles will be found in which the voluntary ability to contract is entirely lacking. These muscles can be charted as flaccid muscles, although this particular type of flaccidity is different from that of the usual lower

motor neuron paralysis. (That there is such a thing as cerebral flaccidity has been shown by the work of Fulton and others, in the studies of the cortex of the chimpanzee.) The muscles then are grouped in antagonistic pairs, and it must be determined whether two spastic muscles are acting against each other, a spastic against a normal muscle, a spastic against a flaccid muscle or a normal against a spastic muscle.

The flaccid muscles must be treated in much the same way as the flaccid muscles of infantile paralysis are treated. That is to say, they must be protected from being overstretched and must be massaged to increase their tone. It has been found that, by forceful resisted contraction of some other muscles in the body, the flaccid muscles may frequently be brought into an involuntary, or automatic, contraction. This can be utilized as a stimulus for developing power in these muscles, and in many instances the patient can be taught to utilize this confusion to bring about a useful contraction in the apparently flaccid muscle. The normal group of muscles, of course, does not need any treatment whatever unless contracture has resulted from flaccidity of antagonists or from gravity.

SURGICAL PROCEDURES

The spastic group must be treated to reduce the spasticity by either gradual voluntary exercises or surgical intervention in the form of partial neurectomy. Neurectomy must be carried out with great care with regard to the degree of weakening to be accomplished. The deciding factors in the procedure are the state of the antagonists and the degree of spasticity in the muscle which is being operated on. For example, if a spastic muscle is pulling against a cerebral flaccid muscle, the degree of neurectomy will have to be more nearly complete than if this muscle were working against a normal muscle. The determination is made by the amount of power in the antagonist, and an attempt is made to balance the power as nearly as possible.

Other surgical procedures, such as lengthening of a tendon, are to be considered at times. Lengthening of a tendon produces a definite weakening of the power of the muscle. Actual tenotomy of a muscle or a tendon should rarely be done, as this leaves no power whatever in the muscle and it cannot work reciprocally against any antagonist. When three or four muscles perform the same function, such as adduction of the legs, tenotomy of some of the adductors will produce a weakening which will result in a balance of power if the abductors seem to be weak. Some patients have been seen, however, in whom complete adductor tenotomies have been done and in whom there is complete flaccidity in the abductors. Their ability to stand is entirely lost by the operative procedure.

Fusion of the joint and operation to block the joint are sometimes used but should be worked out with great care, as the pull of a spastic muscle against a blocked joint will eventually modify the block to such an extent that it might as well never have been done. More recently the technic of transplantation of muscles in the spastic extremity has been developed. Transplantation of spastic muscle is somewhat different from transplantation of muscle in the case of poliomyelitis, as the operative procedure itself so increases the irritability of the muscle postoperatively that unless it is very firmly transplanted the tendency for it to pull loose is great. There is probably a great future in this field in the treatment of true spastic paralysis. For example, the transplantation of the tensor fasciae femoris laterally from its point of origin on the pelvis to the vastus lateralis has in my hands been satisfactory in counteracting the tendency to internal rotation so commonly seen in spastic legs. The muscle loses, by this procedure, its function of internal rotation but acts as a tensor of the vastus lateralis and thus aids to some extent in the ease with which extension of the knee is accomplished. This particular procedure I have now done four or five times and have found great improvement, but it should be done only after a careful evaluation of the power in the external rotators. Of course there is no limit to the possibilities in transplantation of muscle both in the arms and in the legs, and the operation, combined with partial neurectomy or other balancing procedure, can accomplish considerable improvement surgically. However, surgical intervention is really only a step in the treatment of the spastic patient. It should never be considered that he can be cured by surgical measures alone.

For the athetoid patient, on the other hand, little indeed can be accomplished by surgical treatment. Athetosis is not always fixed, and if an athetoid muscle is cut or eliminated by neurectomy or other procedure it is common to find the athetosis jumping to muscles which have not been previously affected by it. This is not always true but is true in so large a percentage of the cases that surgical procedures on athetoid muscles have at the present time been given up.

The basic principle in the treatment of athetosis is relaxation. As has been said before, athetosis disappears in sleep, and the more nearly an athetoid patient can be relaxed the less will be the amplitude of swing of the involuntary contractions in the muscles. Reeducation by teaching voluntary motion from the relaxed position is then utilized, and it produces great improvement. Even in cases of moderate athetosis, gradual elimination of the athetosis has been seen to such an extent that the only remnants of it were somewhat feeble contractions in certain muscles which do not actually bring about motion in the joints. Of course the problem is much greater when the athetosis is distal than when it is proximal.

For severe athetosis the only procedure at present known which is of any help except to induce relaxation is the operative procedure described by Putnam, section of the lateral columns of the cord. This eliminates a large part of the athetosis from the extremities, but there is considerable risk in the operation and cases should be selected with great care before a decision is made with regard to the use of the procedure.

NATURE OF THE PROBLEM

The general care, therefore, of the spastic and of the athetoid patient and of the patient with any other type of cerebral palsy is rather complicated. There must be a program correlated by the orthopedist, the pediatrician, the neurologist, the physical therapist and the speech expert for the motor side and by teachers accustomed to handling the problems of the handicapped on the educational side, and psychologic aid is necessary in adjusting these children and their behavior to the world at large. Physical therapy in the primary stages of the condition should be followed by occupational therapy when the primary motions can be performed and grouped. This should give way to vocational training when the patient is old enough to determine the line in which he is to be trained. The

program constitutes an effort to parallel the mental education of the normal child with a program for physical reeducation which for the normal child is to a great extent automatic.

It is unfortunate that children cannot be born mentally with the equivalent of a high school education. A parallel may be drawn that normal children are born with the equivalent of a physical high school education. It is not considered surprising that it is necessary to spend twelve years giving a child a mental education equivalent to that of a high school graduate, and the point of view toward the cerebral palsies should be that it is necessary to parallel this with physical education over a long period in order to bring in the abilities as they arise and train them as they are developed.

3038 St. Paul Street.

POLIOMYELITIS VIRUS IN HUMAN STOOLS

JAMES D. TRASK, M.D.
A. J. VIGNEC, M.D.
AND
JOHN R. PAUL, M.D.
NEW HAVEN, CONN.

More than twenty-five years ago Kling, Pettersson and Wernstedt [1] in Sweden were successful in isolating the virus of poliomyelitis from the human intestinal tract. They found it in several active cases of the disease and in convalescence. This result was soon repeated in a single fatal case by Kling and Levaditi,[2] and in this country another single instance of its recovery during convalescence was described by Sawyer [3] in 1915.

During subsequent years no one seems to have been able to repeat this work until 1937, when Harmon [4] made brief mention of five successful attempts in which the virus was obtained from the rectal washings of four patients. Kramer [5] has stated that he also has succeeded with similar material.

The present report records our experiences in testing material from the intestinal tract and nasopharynx during a small epidemic of poliomyelitis which occurred in 1937. In it we describe (*a*) three cases of mild abortive poliomyelitis in each of which the virus was recovered once from the nasopharynx and (*b*) another case of a similar type of illness in which the virus was repeatedly recovered from the stools.[6] We believe that the significance of the latter finding lies not so much in the confirmation of the now established fact that poliomyelitis may escape from the human body by the intestinal route as in the type of case which yielded the virus from this site.

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From the Departments of Pediatrics and Medicine, Yale University School of Medicine and the New Haven Hospital and Dispensary.

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CLINICAL MATERIAL AND METHODS

During the fall of 1937 a small outbreak of poliomyelitis occurred in and about the cities of New Haven and Meriden, Conn. Cases from this outbreak furnished our clinical material, and the results of twenty-two tests on fourteen patients appear in table 1. The results of nine tests on material from the nasopharynx and of thirteen on the stools are shown.

The Virus from the Nasopharynx.—Washings from the nasopharynx were obtained and tested during this epidemic from ten children (one of them was a contact

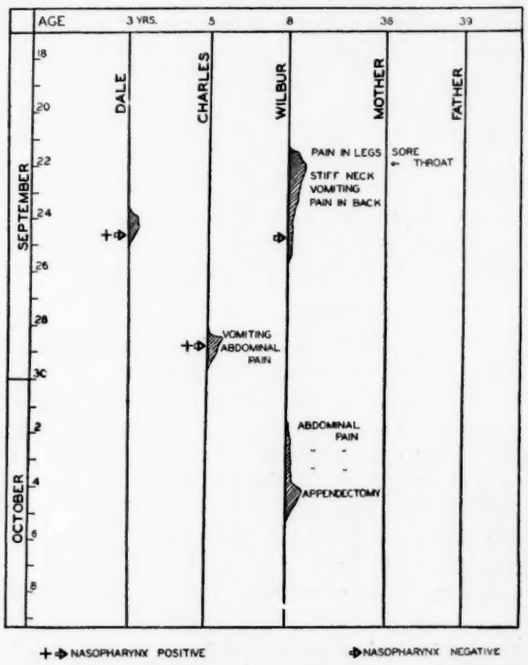

Chart 1.—Schematic diagram of Ch. family, which is composed of the parents and three children. Each individual in the family is portrayed by a vertical line; their ages appear at the top. Shaded areas on the vertical lines roughly show the amount of fever present during their illnesses. Dates along the left margin indicate the period with which we are concerned. Members of this family had been well during August and early September, although several cases of poliomyelitis had occurred in the neighborhood within this period. September 21, Wilbur, the oldest child, had fever, pain in the legs and stiffness of the neck. A diagnosis of nonparalytic poliomyelitis was made. Nasopharyngeal washings were obtained from this child on September 25, and also from the youngest child Dale (see arrows) who had acute fever for two days without other symptoms at this time. Four days later the third child, Charles, had fever, vomiting and abdominal pain, which subsided rapidly. Washings were obtained from him September 29, on which day his spine was somewhat stiff. One week after Wilbur's first symptoms had subsided he began to have abdominal pain and slight fever. October 5 an acutely inflamed appendix was removed. What relationship his appendicitis bore to the preceding illness is not clear. Unfortunately the pathologic specimen was placed in solution of formaldehyde; otherwise an attempt to isolate poliomyelitis virus from it would have been made.

and so does not appear in table 1). From these ten nasopharyngeal tests three positive results are recorded.

The first positive result in which the virus was recovered from the nasopharynx in this series was obtained from a boy of 7 years (John Wn.). He was the younger of two children in the same family (John and Robert), both of whom sustained fairly typical attacks of abortive poliomyelitis in mid-September 1937. The child John became ill September 15 with fever, drowsiness and a stiff neck. September 17 his brother Robert developed similar symptoms; namely, chills, fever, sore throat, with exudate on the tonsils, and a stiff back and neck. Neither illness lasted more than two days and in neither did paralysis develop. The nasopharyngeal washings that yielded the virus were obtained from John within twenty-four hours of the onset of his illness. Robert was not tested.

The other two patients in this series whose nasopharyngeal washings yielded the virus were members of the same family.[7] As the clinical circumstances are more complicated than those just described in the Wn. family, they will be presented in the form of a diagram (chart 1).

Details of the technical procedures used for the determinations in this series of nasopharyngeal washings will appear in another publication. It may suffice to say that the nose and throat of the children were irrigated with sterile distilled water; the return fluid was collected, and to it 10 per cent ether was added as a bactericidal agent, prior to its inoculation into the monkey. Some of the washings were also concentrated by evaporation at low temperatures, according to a method first used by Kramer and his associates [8] and recently modified by one of us.[9] Only fresh animals were used for these inoculation tests. Daily temperature and exercise records were kept on all inoculated monkeys for a period of four weeks, unless it was found necessary to kill them earlier. If an animal showed any sign of experimental poliomyelitis or signs remotely suggesting experimental poliomyelitis, it was killed at what seemed to be an appropriate time; histologic sections were examined from the medulla, cervical, thoracic and lumbar regions of the spinal cord, and an attempt was immediately made to pass the virus to another monkey. If any animal died during the four week period of observation from some cause other than poliomyelitis, the test was considered unsatisfactory. This occurred once with nasopharyngeal washings and five times with stools.

TABLE 1.—*Results of Nine Tests for Poliomyelitis Virus in the Nasopharynx and Thirteen in the Stools*

	Nasopharynx						Stool								
	Day of Disease						Day of Disease								
Type of Case	1	2	3	4-6	7-10	Total	1	2	3	4-6	7-14	15-25	26-75	76-100	Total
Abortive	2/2*	1/1	0/1	0/1	0/1	3/6	...	1/1	...	...	1/1	1/1	0/1	0/4	3/ 8
Paralytic	...	...	...	0/1	0/2	0/3	...	...	...	0/1	0/2	0/2	...	...	0/ 5
Total	2/2	1/1	0/1	0/2	0/3	3/9	...	1/1	...	0/1	1/3	1/3	0/1	0/4	3/13

* 2/2 indicates that, from two out of two satisfactory tests, poliomyelitis virus was recovered.

ABORTIVE POLIOMYELITIS

Apart from the general interest of finding the virus in the nasopharynx in these three cases is the fact that its presence there may be regarded as a diagnostic test for abortive poliomyelitis. In other words, in the absence of this finding at least two of these cases (exemplified by Dale and Charles Ch. in chart 1) might have been disregarded as unimportant or at least of uncertain type. For this reason we have examined with care the symptoms manifested in their illnesses and of other similar illnesses which occurred in this epidemic. The clinical picture which they presented has been found to be about the same as that which we have noted in previous epidemics [10] and in which the presence of the virus in the throat has also served as a diagnostic test for detecting this mild form of the disease. This clinical picture is still inexact, and it is possible that in the absence of special laboratory tests, such as the demonstration of the virus, mild abortive poliomyelitis can be diagnosed only during an epidemic of poliomyelitis; that is, in close association with more definite cases. On the basis of our own experiences with this mild form of poliomyeltis, however, it can be described as an acute illness generally lasting from two to five days and characterized by fever, often by headache and vomiting and occasionally by abdominal pain and sore throat or by a stiff neck but often by a stiff back, which is detected only if one systematically attempts to elicit the "spine sign" by flexion of the vertebral column. Examinations of the spinal fluid have failed to show a pleocytosis in many of those tested.[11] We believe that these ill defined and brief types of illness are by far the commonest form of poliomyelitis. Indeed, they may outnumber the paralytic cases six or eight times,[12] and, as such, they are perhaps of more significance from an epidemiologic standpoint than are the paralytic cases.

It is of particular interest, therefore, that the same type of case (the mild, abortive type) is also capable of yielding the virus from the stools.

THE VIRUS IN THE STOOLS

Thirteen stool specimens from eight patients were satisfactorily tested and three of these (all from the same child) yielded the virus. Again, the child in question was a member of a family [13] in which another case of poliomyelitis had occurred. The clinical circumstances which transpired in this family group are presented in chart 2. Here is shown a family with three children, in which the oldest child (Teddy) had contracted severe, paralytic poliomyelitis early in October, and the youngest child (Daniel) contracted what appeared to be abortive poliomyelitis (onset October 18). Nasopharyngeal washings and stool specimens were obtained from all three children October 18 and 19. Some of the tests on this material were unsatisfactory, but from the diagram in chart 2 it will be seen that Daniel's first stool specimen, obtained on the second day of his disease, yielded the virus of poliomyelitis, and that this finding was repeated on two subsequent stools obtained on the eleventh and twenty-fourth days of his disease respectively. The positive stools from this child have been designated as 1, 2 and 3, the negative ones as 4 and 5. The virus was not recovered from

7. Dr. A. A. Tower of Meriden, Conn., gave us the privilege of studying this family.

8. Kramer, S. D.; Sobel, A. E.; Grossman, L. H., and Hoskwith, B.: Survival of the Virus of Poliomyelitis in the Oral and Nasal Secretion of Convalescents, J. Exper. Med. **64**: 173 (Aug.) 1936.

9. Paul, J. R.: Method for the Concentration of Poliomyelitis Virus in Nasopharyngeal Washings, J. Bact. **35**: 493 (May) 1938

10. (*a*) Paul, J. R.; Salinger, Robert, and Trask, J. D.: "Abortive" Poliomyelitis, J. A. M. A. **98**: 2262 (June 25) 1932; (*b*) Studies on the Epidemiology of Poliomyelitis: I. Methods and Criteria for the Detection of Abortive Poliomyelitis, Am. J. Hyg. **17**: 587 (May) 1933. (*c*) Paul, J. R.; Trask, J. D., and Webster, L. T.: Isolation of Poliomyelitis Virus from the Nasopharynx, J. Exper. Med. **62**: 245 (Aug.) 1935.

11. Trask, J. D., and Harper, P. A.: Diagnostic Problem in Poliomyelitis; Consideration of Typical and Suggestive Cases Showing Normal Spinal Fluid, Yale J. Biol. & Med. **5**: 155 (Dec.) 1932. Paul, Salinger and Trask.[10a] Paul, Trask and Webster.[10c]

12. Paul, J. R.; Salinger, Robert, and Trask, J. D.: Studies on the Epidemiology of Poliomyelitis: II. Incidence of Abortive Types of Poliomyelitis, Am. J. Hyg. **17**: 601 (May) 1933.

13. Dr. Morris Goldstein of New Haven gave us the privilege of studying this family.

any of the nasopharyngeal or stool specimens from other members of the family. Unfortunately, the monkey receiving the nasal washings from Daniel died of streptococcic meningitis.

Samples of the three positive and two negative stools (or extracts from them) which had been obtained from Daniel Sk. were subsequently kept in the refrigerator for some days or weeks, and the results of thirteen tests on material preserved from these five specimens appear in table 2. The fact that some of the tests on this preserved material were positive weeks after the collection of the specimens testifies to an extraordinary stability of poliomyelitis virus in the medium of human fecal material. This is another point of epidemiologic significance.

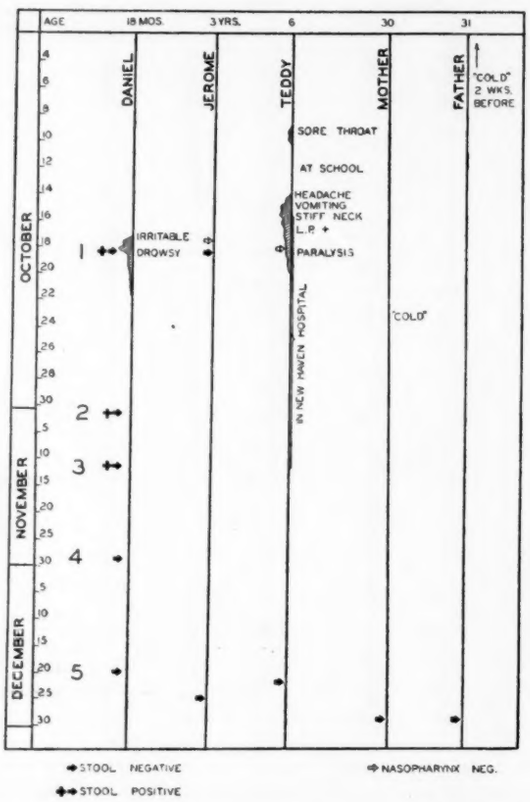

Chart 2.—Schematic diagram of Sk. family. The method of portraying events is the same as in chart 1. All members of the family had been well just before the onset of Teddy's illness, except that on September 24 or 25 the father "had a cold." October 8, Teddy, the oldest child, had a sore throat, and a week later he was hospitalized for severe paralytic poliomyelitis. Some of the details of this illness appear on the chart. L. P. + indicates that a lumbar puncture (performed October 17) revealed a pleocytosis of 160 cells. The youngest child, Daniel, aged 18 months, became ill October 18 with fever and listlessness. The fever continued for about four days. No evidence of muscular weakness was detected; his spine was slightly stiff October 20 and 21. Jerome, the middle child, remained well. The time at which stool specimens and nasopharyngeal washings were obtained appear in the form of arrows.

Methods of Preparing Stools for Inoculation.—Our first few attempts were exploratory,[14] involving the trial of various procedures for preparing extracts of fecal material prior to its inoculation into monkeys. Brief details of these various procedures appear in table 2. Some of the technical details, which are omitted here, have been mentioned in the preliminary report of this work already referred to.[6]

In the first experiment (table 2, stool specimen 1 *a*) the following procedure was used: To 90 cc. of a dilute aqueous extract of Daniel's first stool (October 19) 13.5 cc. of anesthetic ether was added as a bactericidal agent to make an approximate 15 per cent suspension. This was allowed to stand in a tightly stoppered flask overnight in the refrigerator. (Aerobic cultures on blood agar plates taken from the specimen at this time showed no growth.) A portion of this extract was then concentrated to about one fifth of its original volume by evaporation at low temperatures in the Flosdorf-Mudd apparatus.[15] The concentrate represented 12 cc. One half of it was then inoculated into monkey 8-33, the doses being 1 cc. intracerebrally and 5 cc. intraperitoneally.

In later experiments (and also in a few experiments made at an earlier date [16]) we have found that material prepared essentially in the manner just described is often lethal for the monkey. Even though the inoculum may appear to be bacteria free, the animal often dies from necrosis of the brain, meningitis or bacteremia. In fact, of eight monkeys injected intracerebrally in this series of tests, five died prematurely. This fact led us to substitute intraperitoneal inoculations for intracerebral, because the peritoneal cavity will readily allow the injection of larger amounts of stool extracts than can be introduced into the brain, and because the peritoneum seems better able to withstand the immediate effects of this procedure than does the brain. By the intraperitoneal route, doses as large as 30 cc. of aqueous stool extract (originally containing 15 per cent ether) have been injected into one animal (table 2, stool specimen 3, tests *b*, *c* and *f*). Of twenty-seven

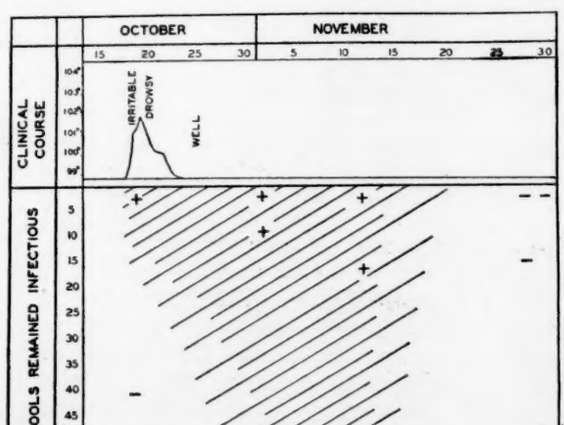

Chart 3.—Schematic diagram to indicate the period during which Daniel Sk.'s stools remained infectious. The clinical course of the mild illness is shown at the top. Not only did stools passed on the twenty-fourth day of illness contain poliomyelitis virus but the virus remained viable in this medium over a period of seventy-two days. Seventeen tests on Daniel's stools are shown. The distribution of the plus signs enable us to outline by the shaded area a theoretic period during which stools in this mild illness remained infectious under the conditions described.

14. Flosdorf, E. W., and Mudd, Stuart: Procedure and Apparatus for Preservation in "Lyophile" Form of Serum and Other Biological Substances, J. Immunol. **29**: 389 (Nov.) 1935.

15. Flosdorf and Mudd.[14] Paul.[9]

16. Our only previous attempts to inoculate stool extracts intracerebrally were made in 1932. Seven monkeys were inoculated at this time with stool specimens from abortive cases of poliomyelitis. Six of these tests proved unsatisfactory because the monkeys died within eleven days of the inoculation. The seventh stool test was negative. Nine (previously unreported) tests were also made with nasopharyngeal washings at this time. They were collected from patients with abortive attacks within the first ten days of their illness. All of these tests were negative.

monkeys thus inoculated intraperitoneally only three have died prematurely. By this means (intraperitoneal inoculation of human stool extract) experimental poliomyelitis was produced in the monkey three times. This infectivity of human poliomyelitis virus for the monkey by way of an extraneural route (i. e., without intracerebral or intraneural inoculation) supplements our recent experiences with the intravenous [17] and intradermal [18] infectivity possessed by some strains of poliomyelitis virus.

A third modification of the technical procedures for preparing the inoculum was also used in some of the preserved extracts from stool specimen 3 (tests *d, e, j, k*). Here the material to be inoculated was precipitated with acetone, following a method used by Howitt,[19] and the resuspended precipitate was inoculated intraperitoneally. This was done with the hope that a concentration of virus might be thus effected. Material treated in this manner proved infectious in one instance (test 3 *d*, monkey 9-06).

Regardless of the methods employed, however, the virus was repeatedly found to be viable in the aqueous stool extracts from Daniel Sk. It was actually isolated six times. In one instance it was found to be viable in the stool seventy-four days after the collection of the stool specimen! The persistence of the virus in the stools not only in the patient during convalescence but its persistence in vitro appears in chart 3. The purpose of this chart is to illustrate the epidemiologic implications of this case. In it one sees the prolonged infectiousness of the child's stools, which existed in vivo and in vitro. This has been such an impressive feature to us, in view of the mildness of the clinical case involved, that we feel that its significance cannot be overemphasized at this time. It may even not be amiss to point out that the diagram of the infectious aspect of this mild illness suggests a picture of an iceberg, seven eighths of the ominous structure of which is submerged below the surface of "clinical perception."

TABLE 2.—*Methods and Results of Animal Inoculations with Daniel Sk.'s Stool Extracts*

No. of Stool Specimens (Chart 3 and Text)	Date Received	Day of Disease	Preparation	Days of Preservation	Route of Inoculation and Dose	Inoculated Monkey's No.	Result: Fever	Result: Paralysis	Result: Lesions	Passage Monkey's No.	Result in Passage Animal
1 a	10/19/37	2	Conc. 5×	3	I. C. 1 cc. / I. P. 5 cc.	8-33	7	7	++	8-48	Poliomyelitis
b	10/19/37	..	Conc. 5×	41	I. P. 4 cc.	8-68	..	..	....		
2 a	11/ 1/37	11	Conc. 3×	2	I. C. 1 cc. / I. P. 5 cc.	8-49	6	8	++	8-62 8-64 8-96	Died, pneumonia Died, brain abscess Poliomyelitis
b	11/ 1/37	..	Conc. 3×	10	I. P. 6 cc.	8-60	7	15	+	8-66 8-97	Died, brain abscess Poliomyelitis
3 a	11/12/37	25	Conc. 5×	3	I. C. 1 cc. / I. P. 6 cc.	8-63	Died, brain abscess				
b	11/12/37	..	Unconc.	17	I. P. 30 cc.	8-69	10	14	+	8-83	Poliomyelitis
c	11/12/37	..	Unconc.	66	I. P. 30 cc.	9-01	9	13	++	9-12 9-13 Rabbits, guinea pigs and mice	Poliomyelitis Died, pneumonia Negative for encephalitis
d	11/12/37	..	Act. ppt.	74	I. P. 9 cc.	9-06	8	13	++	9-21 9-22 Rabbits, guinea pigs and mice	Poliomyelitis Died, meningitis Negative for encephalitis
e	11/12/37	..	Act. ppt.	74	I. P. 18 cc.	9-10	..	..	—		
f	11/12/37	..	Unconc.	74	I. P. 30 cc.	9-09	15	..	++		
g	11/12/37	..	Conc. 10×	72	I. P. 4.4 cc.	9-30	..	..	..		
h	11/12/37	..	Unconc.	92	I. P. 20 cc.	9-25	..	..	—		
i	11/12/37	..	Unconc.	92	I. P. 20 cc.	9-27	..	..	..		
j	11/12/37	..	Act. ppt.	92	I. P. 2.2 cc.	9-24	12	..	—		
k	11/12/37	..	Act. ppt.	92	I. P. 2.2 cc.	9-25	..	..	..		
4 a	11/29/37	43	Conc. 3×	3	I. P. 10 cc.	8-74	Died, peritonitis				
b	11/29/37	..	Unconc.	16	I. P. 10 cc.	8-82	..	..	..		
5 a	12/20/37	64	Conc. 3×	3	I. P. 16 cc.	8-84	..	..	..		
b	12/20/37	..	Unconc.	3	I. P. 16 cc.	8-85	..	..	..		

Conc. 5× = stool extract concentrated to about one-fifth its original volume by evaporation at low temperatures; I. C. 1 cc. = intracerebral inoculation of 1 cc.; I. P. = intraperitoneal inoculation; Fever: 7 = fever began 7 days after inoculation; Paralysis: 7 = paralysis began 7 days after inoculation; Lesions: ++ = histologic lesions in spinal cord extensive; Act. ppt. = acetone precipitate.

In our own previous work on the nasopharynx in poliomyelitis [20] and in the present report, criteria for the recovery of the poliomyelitis virus from this site have rested on the following features: (*a*) on the production of a "clinical picture" in the inoculated monkey which is compatible with that of the experimental disease; i. e., after an appropriate incubation period there is the development of a train of characteristic symptoms usually exemplified by fever, excitement, tremor, ataxia, weakness and paralysis, the latter being generally associated with a fall in temperature; (*b*) when the animal is killed, lesions typical of experimental poliomyelitis must be found in the region of the anterior horn of the spinal cord, in lumbar as well as in cervical levels; i. e., lesions confined to the medulla are insufficient. Furthermore these lesions should be unequivocal and, besides presenting evidence of cell damage in the anterior horn, there must be perivascular infiltrations with mononu-

because we believe ourselves to be arbiters in the matter but because some sort of criteria are necessary for any critical discussion of the subject.

IDENTIFICATION OF THE VIRUS

Ever since the discovery of the poliomyelitis virus in 1909 there has been some confusion as to how frequently this virus has actually been isolated from a human source other than the spinal cord. Such confusion has been the natural result of changing criteria for the identification of poliomyelitis virus as a result of which some of the past claims for its isolation have now long been discarded. But it is still difficult to say which results should be accepted and which discarded, for there are no set diagnostic rules unless one makes them oneself. This we shall attempt in this report, not

17. Trask, J. D.; Paul, J. R.; German, W. J., and Beebe, A. R.: Viruses of Poliomyelitis, Tr. A. Am. Physicians **52**: 306, 1937.
18. Trask, J. D., and Paul, J. R.: Skin Infectivity of Poliomyelitis Virus, Science **87**: 44 (Jan. 14) 1938.
19. Howitt, B.: Poliomyelitis Virus: Results of Treating with Certain Chemicals and with Heat, Proc. Soc. Exper. Biol. & Med. **28**: 158 (Nov.) 1930.

20. Paul, Salinger and Trask.[10a] Paul, Trask and Webster.[10c]

clear cells; (*c*) passage of the strain to a second monkey must be successfully accomplished.

None of the positive tests on human material described in this report or in any of our previous reports have been designated as yielding poliomyelitis virus without fulfilling these three criteria.[21] A fourth criterion (*d*) which has been met in some of the tests in these experiments is that the suspected strain should not produce encephalitis or myelitis in laboratory animals other than the monkey; i. e., on intracerebral inoculation of rabbits, guinea pigs and mice (table 2). Such tests may be helpful in avoiding the possibility of confusing the virus of poliomyelitis with that of lymphocytic choriomeningitis, or perhaps with other viruses which are capable of producing an encephalitis in these animals.

For the further identification of this Sk. strain from the stools we have not yet[21a] resorted to the use of neutralization (and reinoculation) experiments with other strains of poliomyelitis virus because of the questionable diagnostic value of this procedure. This questionability is due to the fact that well marked immunologic differences between some of the better known strains of poliomyelitis virus have been described.[22]

Reference has already been made to the fact that there has been some confusion as to how frequently the virus of poliomyelitis has actually been isolated from the human nasopharynx or the intestinal tract. This confusion is justified and difficult to dispel. If the somewhat rigid criteria for the identification of poliomyelitis virus, which we have outlined in this paper, are applied to most of the data existent in the literature, very few of the previous reports of its recovery from extraneural human sources would be found to be acceptable. Nevertheless, all the tests, whether positive in their outcome or questionable or negative seem to be worthy of reanalysis at this time because it is important to determine whether the literature reveals information as to whether it has been easier in the past to isolate the virus from the nasopharynx than from the intestinal tract.[23] This is difficult, for it is not known with any degree of accuracy what the ratio of positive to negative results has been in tests of this kind, because failure to find the virus in a given site may be due more often to an inadequate method of demonstrating it than to its absence. Furthermore, many negative attempts have been casually described and many have probably not been published at all. From the nasopharynx, however, one finds that some 241 tests are recorded in the literature which can be used in estimates on active cases or convalescents. (This includes a few tests done on tonsillar emulsions from fatal cases. It does not include tests in which the approximate day of the disease is not specified, or the many tests that have been done on healthy contacts.) To these 241 tests are added those reported in this article, which appear in table 1, and also a small series of previously unpublished tests which were made by two of us in 1932.[16] Using a good deal of liberality in the interpretation of some of the results of this whole series of 260 nasopharyngeal tests, one finds that thirty of them offer acceptable evidence of the isolation of poliomyelitis virus from the nasopharynx. On this basis we also find that roughly about 15 per cent of these tests on the nasopharynx have been positive if made during the first ten days of the disease, and 5 per cent have been positive if made in the subsequent six weeks.

With stools or colonic washings a smaller number of experiments are recorded. About eighty-six tests are described (including our own) and from a similar rough estimate we find that about 27 per cent have yielded the virus in the first ten days of the disease and about 12 per cent during the first few weeks of convalescence. In other words, this series reveals the surprising fact that it seems to have been almost twice as easy to find the virus in the stools during early stages of the disease as it has been to find it in the nasopharynx, and more than twice as easy during late stages.

These facts force us to reconsider whether poliomyelitis may not be, to some extent at least, an "intestinal" disease. By this term we do not imply that the virus necessarily enters the body by way of the gastrointestinal tract, for the data at hand do not give any information on this point; they merely emphasize the importance of the feces as a medium of exit. There are a number of supplementary epidemiologic features which this reconsideration of poliomyelitis as an intestinal disease brings up. Foremost among them is the seasonal prevalence of poliomyelitis in temperate climates. Like typhoid and dysentery, it is essentially a summer disease. Another feature, perhaps not so well known, is the presence of lesions in association with the intestinal tract, such as mesenteric lymphadenitis or lesions in the lymphoid tissues of the lower part of the ileum and the cecum. Some of these seem to have been noted more than fifty years ago.[24] Recently they have received renewed attention from Landon and Smith,[25] who have described them in their large series of human autopsies. It is unknown, of course, what the pathogenesis of such lesions is or what their actual relationship to poliomyelitis virus may be, but at least there seems to be enough evidence here to attract attention to this part of the body in an effort to unravel some of the obscurities which exist with regard to the

21. In one "negative" test in this series on stool extracts (3 *f*) two of our criteria were partially fulfilled. In the test animal (monkey 9-09) fever developed but paralysis was not detected. Extensive lesions were subsequently found in the spinal cord, but unfortunately material from this animal was not saved in glycerin and so a passage could not be tried.

21a. Since this paper was submitted for publication these tests have been partially completed and will be reported on subsequently.

22. Trask, J. D.; Paul, J. R.; Beebe, A. R., and German, W. J.: Viruses of Poliomyelitis: Immunological Comparison of Six Strains, J. Exper. Med. **65**: 687 (May) 1937.

23. Sources from which this series of tests on the nasopharyngeal and intestinal tract were drawn include the following:

Rosenau, M. J., and Sheppard, P. A. E.: Anterior Poliomyelitis: Attempts to Transmit the Disease to Monkeys by Inoculation with the Nasal, Pharyngeal and Buccal Secretions of Eighteen Human Cases, Bull. State Bd. Health Massachusetts **6**: 145 (May) 1911.

Strauss, I.: Inoculations of Nasal Secretions from Patients with Acute Poliomyelitis, J. A. M. A. **56**: 1192 (April 22) 1911.

Landsteiner, Karl, Levaditi, Constantin, and Pastia, C.: Récherche du virus dans les organes d'un enfant attient de poliomyelitis aiguë, Semaine méd., Paris **31**: 296 (June 21) 1911.

Kling, Pettersson and Wernstedt.[1]

Kling and Levaditi.[2]

Lucas, W. P., and Osgood, R. B.: Transmission Experiments with the Virus of Poliomyelitis, J. A. M. A. **60**: 1611 (May 24) 1913.

Dubois, P. L.; Neal, J. B., and Zingher, A.: Experimental Studies in Poliomyelitis, ibid. **62**: 19 (Jan. 3) 1914.

Sawyer.[3]

Taylor, E., and Amoss, H. L.: Carriage of the Virus of Poliomyelitis, with Subsequent Development of the Infection, J. Exper. Med. **26**: 745 (Nov.) 1917.

Flexner, Simon, and Amoss, H. L.: Persistence of the Virus of Poliomyelitis in the Nasopharynx, J. Exper. Med. **29**: 379 (April) 1919.

Levaditi, Constantin, and Willemin, L.: Etude de l'epidémie de poliomyelitis du department du bas-Rhin, Ann. Inst. Pasteur **46**: 233 (Feb.) 1931.

Paul, Salinger and Trask.[10]

Footnote 16.

Paul, Trask and Webster.[10e]

Kramer, Sobel, Grossman and Hoskwith.[8]

Harmon.[4]

Stillerman, Maxwell, and Brodie, Maurice: Virus Isolated from Nasal Washings During Acute Poliomyelitis in New York City in 1935, Proc. Soc. Exper. Biol. & Med. **37**: 382 (Nov.) 1937.

24. Rissler, J.: Zur Kenntniss der Veränderungen des Nervensystems bei Poliomyelitis anterior acuta, Nord. med. Ark., Stockholm **20**, 1888, No. 22.

25. Landon, J. F., and Smith, L. W.: Poliomyelitis, New York, Macmillan Company, 1934, p. 25.

pathogenesis of human poliomyelitis. It also may not be amiss to say that many of the implications here set forth go to support the contentions of Toomey,[26] who from a different type of evidence has long supported the idea that poliomyelitis is an intestinal disease.

But whether poliomyelitis is an intestinal disease or whether it has a "gastrointestinal phase" is not our main thesis. One of the main points is that all four cases described in this report which yielded the virus either from the nasopharynx or from the stools were abortive cases. This fact continues to emphasize, to us at least, that the crux of many problems of the epidemiology of poliomyelitis may well rest on the much neglected abortive case, not only during its acute but also during its convalescent stage. That the stools in these mild and generally unrecognized cases (which may outnumber the paralytic cases eight times) may be infectious over a period of three weeks places these patients almost in the status of "healthy carriers." Furthermore, that the virus may survive in vitro in the stools for ten weeks suggests that during an epidemic a high degree of pollution of sewage with poliomyelitis virus could readily occur. In fact, one could almost term this hypothetic degree of sewage pollution as "massive."

SUMMARY

1. Poliomyelitis virus was found in four clinical cases of poliomyelitis: three from the nasopharynx in three cases and three times from the stools in one case.

2. Human stool extract for inoculation into monkeys does not have to be injected intracerebrally in order to produce the experimental disease.

3. The attacks in all cases which yielded the virus were mild and nonparalytic. It is probable that some of the attacks might not have been regarded as examples of poliomyelitis without this finding.

4. The child who showed virus in the stools was ill for only three or four days, and yet the virus persisted in the feces for at least twenty-four days from the onset of his mild illness. It also remained viable for ten weeks in one of his stools which was kept in the refrigerator. Such facts suggest that during an epidemic of poliomyelitis these common, mild and often unrecognized forms of the disease may be responsible for a high degree of pollution of sewage with poliomyelitis virus.

26. Toomey, J. A.: Active and Passive Immunity and Portal of Entry in Poliomyelitis, J. A. M. A. **109:** 402 (Aug. 7) 1937; also earlier papers on poliomyelitis by Toomey.

Time and Ethical Standards. — The medical profession has never allied itself as a profession with any political group. It has and still does recognize the fact that political entanglements mean restrictive hobbles on the legs of medical progress. It asks only to be left free to ply its craft, unhampered by forces unqualified either by training or ethical standards to say what is best for the patient. These ethical standards have stood the test of time and must be maintained. It is a fact that political domination of medical practice is having tremendously devastating influence on the type and quality of medical service wherever such conditions apply. Political expediency and bureaucratic control do not tend toward elevation of professional standards. America was not purged of low-grade medical schools and diploma mills until the medical profession took a firm stand and established certain requirements for medical schools. It was a long, slow fight against political forces to rid the country of the menace of inadequately trained physicians. This was primarily in the interest of the public.—Borzell, Francis F.: The Medical Profession and the Social Worker, *Pennsylvania M. J.* **41:**683 (May) 1938.

CUTANEOUS ABSORPTION OF SEX HORMONES

CARL R. MOORE, PH.D.
JULE K. LAMAR, PH.D.
AND
NAOMI BECK, A.B.
CHICAGO

Despite some previous reports on the effects of hormones when applied to external surfaces,[1] there is yet a lack of appreciation of the readiness with which such substances are taken up by the skin and become effective in the body. This is of importance because hormones are at present available in ordinary commercial items such as face creams. A realization of their ready entrance into the body and some measure of their effects after entering the body should therefore be understood. The following brief account is devoted to presenting some of our experiences in applying both androgens and estrogens in a lanolin-like menstruum or cream to the skin of experimental animals.

APPLICATION OF ANDROGENS

We have employed testosterone and testosterone propionate in a concentration of 50 mg. per ounce of cream.[2] Treatment has usually been limited to one daily application on areas of shaved skin of from 2 to 6 square inches on the back of the neck and shoulders or on the belly. Shaving is not essential, since rubbing the substance into the hair over the same area each day is almost equally effective. Weighed or measured amounts of cream have been such that on the average 0.6 mg. of the pure chemical androgen is contained in each application.

1. Normal male guinea pigs when properly stimulated on the head by an alternating electric current invariably void a seminal discharge containing spermatozoa and the mixed secretions of the accessory reproductive glands. The ejaculate becomes a coagulated, rubber-like mass within five minutes after its discharge. Castrated males are incapable of ejaculation, since the function of the accessory reproductive glands is under male hormone control.[3]

Guinea pigs castrated before sexual maturity and treated one year later received daily applications of ointment on a small area of skin on the back of the neck. Coagulable ejaculates were obtained on electrical stimulation by the seventh day of treatment. Stimulations each successive week resulted in increased amounts of ejaculate up to the fifth stimulation, when ointments were discontinued. Subsequent weekly discharges were progressively smaller and disappeared on the fourth week after cessation of treatment.

2. Daily applications of ointment on the neck of castrated male rats, on bare skin or in the hair, offered a complete substitution for the internal secretion of the testes, as judged by the fresh weights of seminal vesicles and prostate gland.

Ten male rats, 4 months of age, were grouped so that eight animals were castrated. Five of these were

From the Hull Zoological Laboratory, the University of Chicago.
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1. Burrows, Harold, and Kennaway, N. M.: Am. J. Cancer **20:** 48 (Jan.) 1934. Fussänger, R.: Med. chem. Ztschr. **2:** 194, 1934. Burrows, Harold: Am. J. Cancer **23:** 490 (March) 1935. Deanesly, R., and Parkes, A. S.: Proc. Roy. Soc. London, s. B. **124:** 279 (Dec. 7) 1937.

2. Drs. Gregory Stragnell, E. Schwenk and Max Gilbert of Schering Corporation provided ointments containing these androgenic substances.

3. Moore, C. R., and Gallagher, T. F.: Am. J. Anat. **45:** 39 (Jan.) 1930.

treated directly, two were treated indirectly and one remained an untreated castrate control. These ten animals, cited in table 1, illustrate several points. The animals were confined in three cages: one cage contained two normal and one castrate control; the second cage contained five castrates, four of which were anointed daily, while the fifth received treatment only from contact with treated cage mates; the third cage contained two unshaven castrates, only one being treated with ointment. Castrates were treated on the day of orchidectomy and for nineteen consecutive days. All animals were killed on the twentieth day of the experiment.

Attention to table 1 reveals that castrated animal 3, compared with normal controls 1 and 2, had experienced marked regression in the fresh weight of accessory reproductive glands within the twenty days of castration. Castrate 8, though receiving no direct application of the hormone, was caged with four castrates subjected to daily treatment with the ointment containing testosterone. The tendency for rats to sleep in compact groups provides contact with treated cage mates and

TABLE 1.—*Effects of Free Testosterone Applied Daily as an Ointment to Castrated Male Rats for Twenty Days*

Number	Status	Daily Applications	Total Amount	Location	Body Weight, Gm.	Ventral Prostate, Mg.	Seminal Vesicles, Mg.	Comment
1	Normal control		No treatment		290	506	868	Cage A
2	Normal control		No treatment		220	344	999	
3	Castrate control		No treatment		200	76	116	
4	Castrate	1	0.6 mg.	Neck	200	347	923	Cage B
5	Castrate	2	1.2 mg.	Neck	200	425	1,267	
6	Castrate	1	0.6 mg.	Belly	200	252	792	
7	Castrate	2	1.2 mg.	Belly	215	396	1,631	
8	Castrate		No treatment		210	269	316	
9	Castrate	2	1.2 mg.	Neck	240	463	1,133	Cage C*
10	Castrate		No treatment		220	153	212	

* Not shaved.

hence an indirect exposure to the hormone. Castrated animals 9 and 10 were not shaved and only the former one was treated; animal 10, therefore, was exposed to the hormone only through contact with its single cage mate, which received daily treatments always on the same area of hair.

Examination of the data in table 1 demonstrates clearly the following facts: 1. Single daily application of the hormone-containing cream carrying 0.6 mg. of testosterone maintains weights of accessory reproductive organs equivalent to those of untreated normal controls. Cutaneous absorption appears about equally good on the neck or belly. 2. Two daily applications (total 1.2 mg.) causes the seminal vesicles to be of the order of 50 per cent greater than those of the normal controls. 3. Bare skin is not essential for absorption of hormone, since daily application to the same area of hair is only slightly less effective than on bare skin (compare animal 9 with animal 5 or 7). 4. Each untreated castrated male associated with treated cage mates possessed seminal vesicles 100 per cent greater than castrates associated with untreated males only. Absorption from contact has occurred in five repetitions of these experimental conditions and, in some cases not cited, seminal vesicles were only slightly less developed than in cage mates treated directly.

3. Treatment of castrated male rats during the most rapid period of growth of the accessory reproductive organs readily maintains a normal rate of growth of these structures in castrate males with either the free hormone or the propionate, or it causes a much greater growth than in control litter mates. Thus, castrated males treated once a day from day 30 to day 50 with 0.6 mg. of free hormone possessed seminal vesicles weighing more than five times those of normal littermate controls. Castrates treated twice a day with testosterone propionate (total daily 1.2 mg.) from day 50 to day 70 possessed seminal vesicles considerably heavier than those of normal control litter mates.

4. Inquiry has been made with regard to the relative effectiveness of the free hormone and the propionate when applied as a cutaneous ointment in two groups of males: In group A, consisting of eight males 5 months of age, comparison was made of the accessory reproductive organs of two normal controls, two untreated castrates, two castrates receiving ointment containing free hormone twice a day (daily total 1.2 mg.) and two castrates receiving a like amount of propionate-containing ointment. The experiment was terminated on the twentieth day. Seminal vesicles of each hormone-treated male were slightly larger than those from normal controls and ten times the weight of those from untreated castrates; those from animals treated with the free hormone averaged 50 per cent greater than those from castrates treated with the propionate.

Group B, consisting of ten young males from 3½ to 4 months of age, were all castrated. Five were given eighteen single daily treatments on the neck with ointment carrying 0.6 mg. of free testosterone, beginning the day following castration. The second five were similarly treated with ointment carrying 0.6 mg. (daily) of testosterone propionate. All were killed on the day following the last treatment and the fresh weights of accessory reproductive organs were determined by means of a torsion balance after dissection under a binocular microscope. The average weight of the seminal vesicles of the five testosterone-treated males was 584 mg., while the average of four treated with propionate was 220 mg. Owing to slight loss of seminal vesicle secretion during dissection from one male treated with propionate, this animal was excluded from the average weights. This average figure expresses a real difference in effectiveness, since all males on free hormone possessed seminal vesicles that were heavier by 100 mg. than any male receiving the propionate treatments.

It is evident that when applied as an ointment the free hormone is more effective than the combined form.

5. The relative effectiveness of free testosterone, when given by subcutaneous injection in oil and when applied as an ointment on the skin, was investigated on but a single litter of animals; nevertheless the results were convincing. In a six male litter four animals were castrated on day 30; two castrates received daily subcutaneous injections of 0.6 mg. of testosterone in 0.2 cc. of sesame oil while the other two castrates received one daily application of ointment carrying 0.6 mg. of testosterone. The animals were killed on day 50. Seminal vesicles of normal litter mate controls weighed 67 mg., those receiving daily injections weighed 158 mg., while those receiving the same amount of free hormone by ointment weighed 398 mg. Thus cutaneous application of testosterone produced seminal vesicles weighing more than double those from treatment by injection and almost six times more than those from untreated normal litter mates.

6. Since testosterone or the propionate has been found highly injurious to the testes of young growing male rats when given by subcutaneous injections,[4] it became of interest to investigate their possible effects when applied in an ointment.

A litter containing seven males was selected for treatment from day 22 to day 37 and killed on day 38. Three untreated controls occupied one cage while four others were caged together, three of which received treatment and the fourth only indirect treatment through contact with treated cage mates. Each treated male received two daily applications of testosterone propionate on the neck (total daily dose 1.2 mg.). On day 38 the average fresh weight of testes of the three ointment-treated males was 45 per cent below the weight of the untreated controls; the weight of testes of the untreated male associated with treated cage mates was 73 per cent below that of the normal control.

Thus, as with injected hormones, testes of young growing males are gravely injured when testosterone propionate is applied as a cutaneous ointment. The greater injury appearing in the indirectly treated male receives its explanation in the observations of Moore and Price[4] that injury to the testis from injected testosterone propionate is inversely proportional and not parallel with dosage. That this animal actually received smaller amounts of hormone than the three cage mates treated directly is shown by the fact that its seminal vesicles were approximately one half the weight of those from males treated directly. Here also the smaller dosage produced the more severe testicular injury. Though these animals were at an age when sperm heads should have been present,[5] and they were present in the testes of all untreated controls, the testes of the more severely affected male were entirely devoid of sperm heads and those least affected had materially fewer sperm heads than normal.

APPLICATION OF AN ESTROGEN

The effects of chronic cutaneous application of estrogen have already been noted by Burrows and Kennaway,[1] who employed a solution of estrone in benzene for periods up to several months. They determined that estrone was absorbed sufficiently to produce great enlargement and metaplasia of the prostate gland in mice.

Our experiences with application of estrogens as an ointment have been limited to observations made on the effects of a commercial face cream recommended for use by normal women to prevent or eradicate facial wrinkles. It is claimed that the preparation contains estradiol in a concentration of 0.625 mg. per ounce, that its effects are limited to the skin and that it produces no effect on internal structures of the body. It is recommended that one-half spoonful a day should be utilized for rubbing on the face, neck, hands and arms. This amount would carry approximately 40 micrograms for each daily application. Proper results are said to be obtained only by rigorous adherence to daily application and that results should be noticeable within about thirty days.

Since penetration through the skin occurs so readily in the case of testosterone and testosterone propionate, being even more effective for the uncombined hormone than similar amounts introduced in subcutaneous injection, it is of interest to inquire whether estradiol has an effect on the skin and yet exerts no effect on internal organs.

4. Moore, C. R., and Price, Dorothy: Anat. Rec. **71**: 59 (May) 1938.
5. Moore, C. R.: Am. J. Anat. **59**: 63 (May) 1936.

The face cream was purchased in the open market. It was applied in doses (weighed amounts of cream) such that if the labels are correct we used in our experiments one-fifth the recommended daily dose for women, which carried approximately 8.2 micrograms of estradiol.

1. A single daily application for two days to a 3 square inch area of shaved skin on the neck of spayed female rats induced cornified estrous smears within forty-eight hours. Two or three applications failed to hasten the reaction.

2. Normal male guinea pigs from 3 to 4 months old received respectively one, two and three daily applications of the cream on the neck during a period of three weeks. Measurements of the nipple of the mammary gland during the course of the experiment revealed that the nipples of animals receiving treatment once a day doubled their height by the second week; two or three daily treatments caused an increase in the height of mammary nipples of from three to five times in the course of three weeks of treatment. The nipples became turgid and the areolas prominent, and the external portion of the apparatus exceeded that of normal females of similar age.

TABLE 2.—*Effect of One Daily Application of Face Cream Containing Estradiol on Uterine Weight in Spayed Rats*

	Body Weight, Gm.	Uterine Weight, Mg.
A. Treatment, once daily, days 39-59		
Normal control	92	395 (fluid)
Normal control	92	200
Spayed, treated	92	213
Spayed, treated	100	238
Spayed, no treatments	84	19
B. Young virgin adults, 19 daily treatments		
Normal control	160	218
Normal control	150	318
Normal control	142	231
Normal control	160	269
Normal control	150	268
Spayed, treated	132	382
Spayed, treated	132	390
Spayed, treated	156	338
Spayed, treated	158	366
Spayed, treated	168	366
Spayed, no treatment	156	68

3. Female rats were subjected to ovariectomy on day 39 and face cream was applied once a day on the neck until day 59, when the animals were killed and their uterine weights compared with normal litter mate controls and with untreated spayed females. In table 2 *A* the average uterine weight from two litter mate controls was approximately 200 mg. (the heavier fluid-filled proestrus uterus is naturally temporarily heavier because of fluid), that from spayed treated animals 225 mg. and the spayed untreated uterus 19 mg. The vaginal smear of each spayed treated female was heavily cornified.

Uterine response for older females following ovarian removal and treatment with face cream is illustrated in table 2 *B*; single daily applications on the neck were given for nineteen days with death on the day following the last application. One sees that the weight of the uterus of each of five spayed treated females is greater than the heaviest uterus among the five control females; average uterine weight for the five spayed treated females is 48 per cent greater than the average of five normal control uteri.

Such treatment of spayed females, therefore, more than substitutes for the loss of the ovaries.

4. It was of interest to examine the effect of the face cream on normal male rats. The estrogenic substance from extracts of human placentas and human pregnancy urine has been found to be highly injurious to the testicles when administered by subcutaneous injection.[6]

In a litter containing five males, three were treated once a day with one-fifth the recommended daily dose from day 37 to day 56 and killed on day 57. The average weight of the testes of two untreated controls was 2.179 Gm., that of three males treated with face cream 0.4127 Gm., or a reduction in the weight of the testes in treated males of 81 per cent as compared with normal litter mate controls. The weight of seminal vesicles in normal controls was 179 mg. as against 16 mg. for treated males, or a reduction of 90 per cent.

COMMENT

The results of experiments here cited are important for the demonstration of the ease with which sex hormones are absorbed through the skin rather than for presenting hitherto unknown effects of the hormones themselves. Many methods of administration of hormones have been studied in an attempt to reduplicate the activity of the intact sex glands as regards both the proper substances to be employed and the proper release of the substances in the body. Subcutaneous injections in oil have served more frequently as methods of application, but oral administration, nasal sprays, vaginal suppositories, cutaneous application and subcutaneous implantation of crystalline pellets have been used by various workers.

Deanesly and Parkes[1] have investigated various methods of application and consider that the subcutaneous implantation of pellets of crystalline material is perhaps the most efficacious means. By such procedures it is believed that absorption in body fluids is both slow and continuous and that the high and low concentrations arising from daily subcutaneous injections are avoided. It is likewise recognized that the absorption rate of hormones varies with the rise of different concentrations and different oils.

The results presented here call especial attention to the ease with which hormones may be applied as ordinary ointments as well as the readiness with which the substances are passed into the body and produce such effects as are known to follow subcutaneous injections in oil. It is evident from the experiment that ordinary testosterone is more effective than the propionate when the substances are applied as ointments on the skin. Similarly there is good evidence of greater effectiveness of testosterone when applied to the skin as an ointment than when injected subcutaneously in small quantities of sesame oil. It is presumed that these phenomena reveal a more gradual and continuous absorption through the skin than occurs when administration is by subcutaneous injections, and it is also apparent that the recognized effective superiority of propionate over the free hormone, in evidence from subcutaneous administration, is reversed when application is by means of ointment.

The ease with which cutaneous ointments containing hormone are applied and the tremendous influence that these substances have when taken into the body more or less continuously present the possible menace that would apply to any powerful drug that is easily procured and administered. It raises decidedly the question of the propriety of including such substances in face creams for use by normal women on the presumption that it is beneficial in removing or warding off wrinkles and that all effects are limited to the skin. When one-fifth the recommended daily dose applied on a relatively very small area of skin causes in normal male guinea pigs a doubling or tripling of the height of the mammary nipple within a period of from two to three weeks, when it maintains the functional state of the uterus in ovariectomized female rats, when it brings on vaginal cornification or when it exerts profound injury on the testicles of normal male rats, it would certainly appear to be demonstrated that the effectiveness of the substance in question extends beyond the surface of the skin.

The fundamental question for consideration, and one that would appear to merit closest attention, is the influence that such administrations may have on the internal regulatory mechanism of the normal female reproductive functions. Much has already been written on ideas concerning the controlling mechanisms of reproductive cycles. Whereas the ovarian hormones play a fundamental characteristic role, this does not imply a more or less continuous liberation of hormone in the body but rather a series of periodic changes characterized by high and low concentrations. The sex glands are under an extraneous control believed to be largely centered in pituitary activity, and this in turn appears to be closely regulated by concentrations of gonad hormones. It is well known that administrations of estrogens to experimental animals disturb the normal controlling mechanisms, and in the animals here cited small amounts of the alleged wrinkle-removing face cream certainly maintain the animal in continuous vaginal estrus.

When hormone therapy is indicated, administration as skin ointments may prove to be the method of choice.

SUMMARY AND CONCLUSIONS

1. Testosterone or testosterone propionate applied on the skin as an ointment is readily absorbed and either maintains the accessory reproductive organs of castrate males in a normal reproductive state or stimulates their development precociously in the young or decidedly above the normal levels in adults.

2. These androgens, so administered, exert effects similar to those obtained following subcutaneous injections. They (*a*) maintain reproductive accessories in castrate males at all ages, (*b*) reconstitute castrated guinea pigs within seven days of treatment to a state of producing coagulable ejaculates on electrical stimulation of the head and (*c*) produce injuries to testes of normal growing young male rats.

3. Face cream (stated to contain estradiol) sold commercially and recommended for the removal of wrinkles from normal women has decided internal effects when applied daily on the skin of experimental animals. Such treatments (*a*) stimulate mammary development on normal male guinea pigs, (*b*) induce cornified vaginal estrous smears in spayed female rats, (*c*) maintain or increase normal growth of the uterus in young or mature spayed rats and (*d*) reduce the weight of testes by 80 per cent and the weight of seminal vesicles by 90 per cent in young male rats in comparison with normal litter mates.

4. These results both emphasize the efficiency of applying hormones in a skin ointment and at the same time suggest caution in the use by normal persons of articles containing these active principles.

6. Moore, C. R., and Price, Dorothy: Am. J. Anat. **50**: 13 (March) 1932.

FOLLOW-UP STUDIES OF THE 1933 ST. LOUIS EPIDEMIC OF ENCEPHALITIS

J. F. BREDECK, M.D.
G. O. BROUN, M.D.
T. C. HEMPELMANN, M.D.
J. F. McFADDEN, M.D.
AND
H. I. SPECTOR, M.D.
ST. LOUIS

Within a few weeks after the nature of the encephalitis in the St. Louis epidemic was determined, the importance of a detailed study of the sequelae occurring in patients who had recovered was realized and plans were laid by the Metropolitan Health Council of Greater St. Louis for a follow-up study on each patient.

TABLE 1.—*Summary of Cases Occurring in the City*

Cases reported		585
Deaths reported		130
		455
Mistaken diagnosis		15
		440
Not found or no complete report submitted		65
Follow-up reports received		375

TABLE 2.—*Results of Second Follow-Up Study, 1934-1935*

Total number of reported cases, from the city and county, for the period of Aug. to Dec. 31, 1933	1,095	
Deaths in same period	201	
Letters sent to patients requesting reexamination		874
Letters returned for various reasons	144	
Dead	4	
Failed to cooperate	395	
		543
Total number reexamined for second time		331

TABLE 3.—*Analysis of Symptoms*

	Yes	No
1. Headache	135	196
2. Sleeplessness	65	266
3. Drowsiness	71	260
4. Nervousness	164	167
5. Depressed feeling	70	261
6. Weakness	96	235
7. Fatigability	124	207
8. Dizziness	88	243
9. Irritability	85	246
10. Excitability	99	232
11. Inability to concentrate	59	272
12. Forgetfulness	91	240
13. General pain	78	253
14. Hearing difficulty	49	282
15. Speech disturbance	16	315
16. Double vision	47	284
17. Difficulty in smelling	16	315
18. Difference in taste of food	14	317
19. Difficulty in walking	70	261
20. Muscular tremors	32	299
21. Convulsions	1	330
22. Other complaints (not previously mentioned)	52	279
23. Complaints before encephalitis (already mentioned)	92	239

Accordingly, the first study of cases occurring in the city was started early in December 1933 by the St. Louis Health Division and completed the first of March 1934. Notifications were sent to the surviving patients who had been in the local hospitals requesting each patient to be present for a follow-up clinic on a specified day when all interested physicians could attend.

The follow-up of physicians' private patients was carried on through the attending physicians, who were sent a questionnaire for each case reported.

Table 1 is a summary of the cases occurring in the city reported at the time the follow-up was started.

After analysis of the 375 reports received it was obvious that this first follow-up study was not at all satisfactory, since some of the reports were not clear as to whether the symptoms of the patient were really after-effects of the encephalitis or whether they had been present in the same degree before the illness; in some instances it was evident that symptoms during the acute stage of the disease were included in the report, and in other instances it was not entirely clear as to whether the symptoms noted were observed during the acute stage or at the time of the follow-up examination.

It was then decided by the committee of the Metropolitan Health Council to make a second follow-up study on all the surviving patients, city and county.

TABLE 4.—*Complaints According to Age Groups*

Ages	Subjective Complaints Only	Subjective Complaints and Possible Organic Residues	No Complaints	Total
Under 1 year	0	0	0	0
1 to 4 years	2	1	3	6
5 to 9 years	9	3	12	24
10 to 14 years	5	2	15	22
15 to 19 years	10	1	10	21
20 to 24 years	12	4	5	21
25 to 29 years	10	3	10	23
30 to 39 years	19	2	14	35
40 to 49 years	30	4	23	57
50 to 59 years	32	8	21	61
60 to 69 years	22	3	22	47
70 years and over	9	0	5	14
Total	160	31	140	331

TABLE 5.—*Occupational and Other Incidental Facts of Interest*

	Yes	No	Died	Total
1. Did you feel perfectly well before attack of encephalitis?	237	92	2	331
2. Was your illness				
Mild	100			
Severe	228	..	...	331
Not stated	3			
3. Has health been same, better or worse since attack of encephalitis?				
Same	141			
Better	79	..	...	331
Worse	111			
4. Are you now working?	202	127	2	331
5. Have you returned to previous occupation?	250	79	2	331
6. If not returned to previous occupation—Why?				
Physically unable				22
Going to school or of preschool age			(preschool)	7
Not employed before illness				32
Unable to find work				5
Retired				
Changed type of work				7
No answer				4
Died				2
Total				79
7. If not working—Why?				
Physically unable				21
Going to school or of preschool age				61
Not employed before illness				
Unable to find work				37
Retired				3
Changed type of work				
No answer				3
Died				2
Total				127

8. Ages of those "physically unable" to work:
20 to 24 years....4 cases; 50 to 59 years....6 cases
30 to 39 years....3 cases; 60 to 69 years....3 cases
40 to 49 years....2 cases; 70 years and over....3 cases

From the St. Louis Health Division, J. F. Bredeck, M.D., health commissioner.

Dr. David Barr, Dr. Paul Zentay, Dr. John Eschenbrenner and the members of the Metropolitan Health Council of Greater St. Louis assisted the Special Committee in planning the follow-up studies.

A questionnaire was prepared, simply worded to avoid misinterpretation of the questions, and sent to 874 supposedly surviving patients in the city and county.

The results of the second follow-up study, which was carried on during the fall of 1934 and the spring of 1935, are given in table 2.

TABLE 6.—*Results of Third Follow-Up of Thirty-One Selected Cases of Encephalitis According to Age Groups (1936)*

Subjective Complaints and Definite Organic Residues Found		Only Subjective Complaints Found	
Ages	No.	Ages	No.
Under 1 year	0	Under 1 year	0
1 to 4 years	1	1 to 4 years	0
5 to 9 years	1	5 to 9 years	1
10 to 14 years	0	10 to 14 years	1
15 to 19 years	0	15 to 19 years	0
20 to 24 years	4	20 to 24 years	1
25 to 29 years	2	25 to 29 years	1
30 to 39 years	3	30 to 39 years	0
40 to 49 years	1	40 to 49 years	0
50 to 59 years	5	50 to 59 years	3
60 to 69 years	1	60 to 69 years	2
	18		9

No Complaints	
Ages	No.
30 to 39 years	1
60 to 70 years	2
Dead	1

After an analysis had been completed of the results of the second follow-up study, it became obvious to the committee that it would be necessary to undertake a third follow-up study primarily for the purpose of making a reexamination, at some future date, of those patients who presented not only residual symptoms but also organic residues. There were thirty-one such patients.

The health commissioner, therefore, appointed a special committee for this purpose, consisting of an internist, a pediatrician, a neurologist and the assistant health commissioner, and plans were made for a third reexamination of these thirty-one patients. The results of the third follow-up study are shown in table 6.

The important facts to be noted in the figures given in the various tables are the following: The mortality, including deaths since the epidemic subsided, was 18.7 per cent. Of 331 patients reexamined, 141 felt as well as before the attack of encephalitis and seventy-nine reported their health improved. Therefore, a total of 66 per cent felt that they had experienced no impairment of health as a result of the disease. Only twenty-two patients, or 6⅔ per cent, felt that they were physically unable to resume their previous occupation. An analysis of these cases showed that six of these patients were above 60 years of age, and the infirmities of age of these patients may have been as important as the residuals of encephalitis in rendering them physically unable to work.

TABLE 7.—*Nature of Organic Defects Found in the Eighteen Cases*

Deafness	2
Speech defect	6
Visual disturbances	6
Positive Oppenheim and Babinski signs	1
Difficulty in walking	6
Change in acuity of smell	1
Lateral nystagmus	1
Positive Romberg sign	3
Paralysis of both lower extremities	1
Partial paralysis of upper extremities	1
Right hemiplegia	1
Epileptiform convulsions	1

TABLE 8.—*Outstanding General Symptoms in Group with Organic Defects*

Impaired memory	Dizziness
Nervousness	Inability to walk firmly
Irritability	Inability to work
Weakness	Sleeplessness

Only thirty-two patients complained of muscular tremors; i. e., 11 per cent of all patients reexamined. None of these showed definite evidence of parkinsonism. The organic residuals found on physical examination were limited to eighteen patients, or only 5.7 per cent of all patients examined.

TABLE 9.—*Summary of Comparative Figures from Studies of Various Observers*

	Total Cases Studied	Percentage of Mortality Acute and Chronic Stages	Number of Surviving Cases Studied	Percentage of Survivors Recovered: Health as Good or Better than Before Attack	Percentage of Survivors; No Complaints Whatever	Percentage of Survivors with Sequels or Complaints Not Preventing Work	Percentage of Survivors Physically Unable to Work	Percentage of Survivors Developing Parkinsonism
Parsons,[1] England, Scotland, Ireland	3,112	32.2	2,110	38.2	....	27.4	34.3	25.0
Ashie Main,[2] Glasgow	65	27.7	47	17.0	....	63.9	19.1	19.1
Reys,[3] Strasbourg	100	10.0	144	10.0	....	20.0	70.0	40.0
Italian Public Health Reports [4]	4,919	25.0	...	....	....	....	....	....
von Economo,[5] Vienna	?	40.0	?	23.3	....	43.3	33.3	
Stern,[6] Goettingen	107	5.6	101	12.8	....	33.8	53.4	58.4
Howe,[7] Baltimore (children)	66	18.2	54	51.8	....	27.7	20.4	20.4
Ziegler,[8] Mayo Clinic	752	13.2	655	1.5	....	47.2	67.5	77.0
Kaneko and Aoki,[9] Japan (type A)	102	24.5	....	....	....	....	....	....
Kaneko,[10] Japan (type B)	6,949	55.6	2,000	96.9	....	Per cent of all survivors with residuals of any type 3.11		Seldom observed
Present study, St. Louis epidemic	1,100	18.7	331	66.0	42	51.0*	6.6	11.0†

* Some of these complaints existed prior to attack of encephalitis.
† Eleven per cent of all patients had some type of muscular tremor. No advanced parkinsonism was seen.

COMMENT

These observations may be contrasted with those previously reported for cases of the winter type of encephalitis. A brief summary of comparative figures from the reported studies of Parsons,[1] Main,[2] Reys,[3] the Italian Public Health Reports,[4] von Economo,[5]

1. Parsons, A. C.: Proc. Roy. Soc. Med. **21**: 1307-1318 (June) 1928.
2. Main, Ashie: J. Hyg. **31**: 162-188 (April) 1931.
3. Reys, L.: L'encéphalite épidémique, Paris, 1922.
4. Italian Public Health Reports, quoted by Stern.[6]
5. von Economo, Constantin: Die Encephalitis lethargica, Berlin, Urban & Schwarzenberg, 1929.

Stern,[6] Howe,[7] Ziegler[8] and Kaneko and Aoki[9] are given in table 9. The statistics of Kaneko[10] for the type B encephalitis are also included.

While the mortality varies widely in the series reported, it would appear that the mortality reported by the European observers for the winter type of the disease, with the exception of the reports of Reys and Stern, is higher than that of any of the American observers. The study reported by Howe concerned children living near Baltimore. The figures given by Ziegler relate to patients who came to the Mayo Clinic largely for the residuals of the chronic stage of the disease. Hence the mortality of the acute stage is largely eliminated. The mortality of the summer type of encephalitis in Japan is higher than that of the St. Louis summer epidemic.

The percentage of complete recovery of health is apparently much higher in the summer type of the disease than in the winter type. Two thirds of all patients studied in the St. Louis outbreak reported restoration of health. In Japan the percentage of residuals found was very low—much lower in fact than we have found in the present series. Of the figures on the winter type of the disease, the most favorable are those of Howe, who found that 51.8 per cent of the children surviving the disease recovered. The very low figure for recovery in the series of Ziegler is due to the fact already noted that he was dealing largely with patients in the chronic stage showing marked residuals and not a group of patients studied from the time of the acute attack. Forty-two per cent of our patients reported not only no complaints attributable to encephalitis but no complaints at all.

One of the most encouraging features of the present study is the very small percentage of total disability found; namely, 6⅔. This is in striking contrast with all studies of the winter type of encephalitis, in which the total disability varies from 19.1 to 70 per cent. This difference is apparently due in a large part to the fact that so far severe parkinsonism has not been noted as a residual. It is true that 11 per cent of our patients complain of muscular tremors, but in most instances these are slight and not disabling. While it is still too early to say that parkinsonism will not develop, the situation at the present time is most encouraging in this respect. While no accurate figures are available, the winter type of encephalitis, when occurring in the vicinity of St. Louis, has a high percentage of residuals of parkinsonism. This would appear to be an important difference in the two types of encephalitis.

It is noteworthy that the organic residuals actually observed on physical examination were present in but 5.7 per cent of all cases and were often not of great severity.

On the other hand, subjective nervous complaints of slight or moderate severity are fairly frequent residuals. In the cases included in the present study, nervous excitability was reported in 42 per cent, irritability was a complaint in 45 per cent, loss of memory was also a common residual, being reported in 38 per cent of all cases, and drowsiness occurred in 27 per cent. Some of these complaints were present prior to the attack of encephalitis. Subjective nervous complaints, nevertheless, would appear to be by far the most common residuals of the St. Louis type of encephalitis. They are of sufficient severity to cause complete or serious incapacity in but few instances.

The most important disturbance of the motor nervous mechanism noted was difficulty in walking. This was reported in about 25 per cent of all cases. It was described as an unsteadiness of gait or as difficulty in walking in a straight line. This complaint was seldom of sufficient severity to incapacitate the patient.

6. Stern, Felix: Die epidemische Encephalitis, Berlin, Julius Springer, 1922.
7. Howe, H. A.: Bull. Johns Hopkins Hosp. **47**: 123-156 (Sept.) 1930.
8. Ziegler, L. H.: Follow-up Studies on Persons Who Have Had Epidemic Encephalitis, J. A. M. A. **91**: 138-141 (July 21) 1928.
9. Kaneko, R., and Aoki, Y.: Ergebn. d. inn. Med. u. Kinderh. **34**: 342, 1928.
10. Kaneko, R.: Japan M. World. **5**: 237-241 (Sept.) 1925.

SUMMARY

A restudy of patients in St. Louis and St. Louis County who suffered an attack of encephalitis in the summer of 1933 shows complete recovery of 66 per cent of all the patients, but only 6.3 per cent are physically unable to resume their previous occupations. Severe parkinsonism so far is quite uncommon as a residual. Mild subjective nervous complaints are the most common residuals, particularly headaches, nervous irritability, loss of memory and drowsiness.

Municipal Courts Building.

MENINGO-ENCEPHALITIS IN MUMPS

HERMAN FINKELSTEIN, M.D.
WEST ORANGE, N. J.

It is fairly well known that meningo-encephalitis may occur during the course of mumps, but its frequency has never been ascertained. It is my purpose in this paper to show that meningo-encephalitis occurs quite frequently in mumps, though usually with such mild symptoms that unless one resorts to spinal punctures at the slightest indication the diagnosis will not be made in many cases.

During the period of two and a half months in October, November and December 1937, routine spinal punctures were done on practically all patients with mumps admitted to the Willard Parker Hospital with the exception of adult patients and patients with mumps that occurred simultaneously with some other disease. About forty patients had spinal punctures done as soon after admission as was feasible. A complete physical and neurologic examination preceded the spinal puncture. All spinal fluids were examined in Dr. Josephine B. Neal's laboratory of the health department and in the laboratory of the Willard Parker Hospital. Sixteen of these cases in which abnormal spinal fluids were found are being reported. They were divided into three groups, depending on the severity of the symptoms: group A, severe; group B, mild; group C, symptom free.

GROUP A

The four patients in group A, at some time during the first week of their illness, had severe clinical signs and symptoms of involvement of the central nervous system. These patients presented extreme drowsiness, severe headache, malaise, fever and vomiting. They sometimes presented abnormal neurologic signs, such as a positive Kernig, a positive Brudzinski and nuchal rigidity. The symptoms persisted for several days, the lethargy lasting from three days to a week. Headache persisted for from four to five days in each of the four cases. Sedatives were resorted to, since spinal punctures did not relieve the patients of their headaches.

From the Mumps Service of the Willard Parker Hospital of New York.

Patient 3, while convalescing, suddenly had a psychosis and was transferred to Bellevue Hospital for observation, where the diagnosis toxic psychosis was made because the patient was confused for a few days, but it cleared up rapidly. The psychosis was attributed to the mumps.

GROUP B

The six patients in group B had mild symptoms, including slight headache, listlessness, anorexia and slight fever. These symptoms were so mild and of such short duration that, under ordinary circumstances, one would not consider the diagnosis of meningo-

Physical Examination, Course and Spinal Fluid Changes in Three Groups.

Case	Date of Onset of Mumps	Date of Spinal Tap	Physical Examination on Admission	Course	Spinal Fluid
			GROUP A		
1	12/23	12/26	Boy, aged 9 years, temperature 103 with 3 day history of mumps, sore throat, fever; convulsions on admission; pupils widely dilated and did not react to light; abdominal reflexes absent	Semicomatose and disoriented; temperature normal after 5 days; mentally normal 1 week after admission; reflexes normal; could not take food or fluid by mouth for 4 days; vomited when forced	Cells 60, 98% monocytes; culture negative; albumin 1 plus, globulin 1 plus, sugar 3 plus
2	12/26	12/29	Boy, aged 6 years, temperature 104; 3 day history of mumps; very drowsy; chills; could not be aroused on admission; neurologic examination negative	Temperature normal after 3 days; mentally clear after 3 days	Cells 240, monocytes predominate; culture negative; albumin 1 plus, globulin 1 plus, sugar 3 plus
3	12/13	12/20	Youth, aged 17, with 7 day history of fever, mumps and orchitis, temperature 105.2 on admission; acutely ill, markedly drowsy, difficult to arouse, headache, moderate nuchal rigidity, Kernig and Brudzinski negative	Temperature dropped to normal in 24 hours; drowsiness and headache lasted about 72 hours after admission; during third week of convalescence a psychosis developed; transferred to Bellevue Hospital for observation	Cells 60, monocytes predominating; culture negative; albumin 1 plus, globulin 1 plus, sugar 3 plus; fluid clear
4	12/15	12/17	Woman, aged 25; temperature 102 on admission with 2 day history of mumps; nausea, vomiting, abdominal pain; very drowsy; could not be aroused; neurologic examination negative	Temperature normal in 48 hours; headache severe and drowsiness lasted 4 to 5 days; showed psychic changes on fourth day after admission; lasted 2 to 3 hours	Fluid clear; cell count unsuccessful; monocytes increased in smear; culture negative; albumin 1 plus, globulin 1 plus, sugar 3 plus
			GROUP B		
1	10/28	11/ 1	Boy, aged 3 years; temperature on admission 102; not ill; 1 day history of mumps; neurologic examination negative	Temperature normal 1 day after admission; 11/1 temperature rose to 101; became drowsy; neurologic examination negative; after 24 hours temperature normal, symptoms relieved	Fluid hazy (slight); cells 170, monocytes predominating; culture negative; albumin 1 plus, globulin 1 plus, sugar 3 plus
2	10/28	11/ 3	Boy, aged 9 years; temperature 101; not ill; 1 day history of mumps; neurologic examination negative	Temperature normal 11/2, then rose sharply to 104; had slight headache, slight drowsiness, vomited once; slight nuchal rigidity; slight Kernig and Brudzinski; temperature normal and signs and symptoms disappeared in 24 hours	Fluid clear; cells 140, monocytes predominating; culture negative; albumin 1 plus, globulin 1 plus, sugar 3 plus
3	11/21	11/25	Girl, aged 8 years; temperature 102; 3 day history of mumps; not ill on admission; neurologic examination negative	11/25, temperature normal in a. m., in p. m. temperature rose to 104; no complaints except slight drowsiness; neurologic examination negative; temperature normal 12/3	Fluid clear; cells 25; culture negative; albumin 1 plus, globulin 1 plus, sugar 3 plus
4	12/21	12/27	Boy, aged 4 years; temperature 99 on admission; 1 day history of mumps; not ill; neurologic examination negative	Temperature normal until 12/26 when it rose to 103; slight drowsiness, no other complaints; neurologic examination negative; temperature normal on 12/31	Fluid slightly hazy; cells 245, monocytes predominating; culture negative; albumin 1 plus, globulin 1 plus, sugar 3 plus
5	11/ 5	(*a*) 11/12 (*b*) 11/17	Boy, aged 7 years; temperature 99; 5 day history of mumps; not ill except for slight sore throat; neurologic examination negative	11/11, had slight headache and drowsiness, vomited twice; temperature normal 11/13, at which time patient was symptom free; neuorlogic examination negative	(*a*) Fluid hazy; 98% monocytes; cells 1,250; culture negative; albumin 1 plus, globulin 1 plus, sugar 3 plus (*b*) Fluid clear; cells 15, monocytes predominating; culture negative; albumin 1 plus, globulin 1 plus, sugar 3 plus
6	10/21	10/24	Girl, aged 5 years; temperature normal; not ill on admission; 1 day history of mumps; neurologic examination negative	10/23, temperature rose to 102; had slight headache, anorexia, listless; vomited once; temperature normal after 24 hours; symptoms disappeared after 24 hours	Fluid slightly hazy; cells 330; culture negative; albumin 1 plus, globulin 1 plus, sugar 3 plus
			GROUP C		
1	11/24	11/29	Boy, aged 6 years; temperature normal; 2 day history of mumps; not ill; neurologic examination negative	No complaints	Fluid clear; cells 15, monocytes predominating; albumin 1 plus; globulin 1 plus, sugar 3 plus
2	12/10	12/11	Youth, aged 17 years; temperature normal; 1 day history of mumps; not ill; neurologic examination negative	No complaints; temperature normal	Fluid clear; cells 15, monocytes predominating; albumin 1 plus; globulin 1 plus, sugar 3 plus
3	12/20	(*a*) 12/22 (*b*) 12/28	Boy, aged 5 years; temperature 99; 1 day history of mumps; no complaints; neurologic examination negative	12/28 had rise in temperature to 105; no complaints; physical and neurologic examinations negative; temperature dropped to normal 12/29	(*a*) Fluid clear; cells 10, monocytes predominating; albumin 1 plus (slight), globulin 1 plus (slight), sugar 3 plus (*b*) Fluid clear; cells 70; monocytes predominating; albumin 1 plus, globulin 1 plus, sugar 3 plus
4	11/ 7	11/13	Boy, aged 5 years; temperature 102; 1 day history of mumps; not ill; no complaints; neurologic examination negative	Temperature dropped to 99 11/9, 11/13 rose to 101; no complaints at any time; physical and neurologic examinations negative	Fluid clear; cells 880, 98% monocytes; albumin 1 plus, globulin 1 plus, sugar 3 plus
5	11/29	12/ 4	Boy, aged 6 years; temperature on admission 101; 1 day history of mumps; not ill; no complaints; neurologic examination negative	Temperature dropped to normal 12/1 and remained normal; no complaints	Fluid clear; cells 25, monocytes predominating; culture negative; albumin 1 plus, globulin 1 plus, sugar 3 plus
6	11/ 8	11/13	Boy, aged 7 years; temperature on admission 101; no complaints; neurologic examination negative	During first 5 days temperature varied from 99 to 100 and then remained normal; had a mild sore throat 11/13	Fluid clear; cells 200, monocytes predominating; culture negative; albumin 1 plus, globulin 1 plus, sugar 3 plus

Normal spinal fluid: Fluid, clear; cells, 0 to 10; smear, negative; culture, negative; albumin, plus-minus (±); globulin, plus-minus (±); sugar, 3 plus.

encephalitis nor would one resort to a lumbar puncture for diagnosis. The symptoms did not last for more than a few hours and were not severe enough to require sedation.

GROUP C

The six cases in group C did not present any sign or symptom clinically which would even suggest the possibility of meningo-encephalitis. They were all symptom free although, in some of the cases, there occurred a slight rise in temperature for from twelve to twenty-four hours.

Examination of the spinal fluid in all these sixteen cases showed an increase in the cell count. The fluids with the higher cell counts were hazy in appearance. The cell counts did not vary with the severity of the disease, since high cell counts were found in some of the milder cases. As a matter of fact, the highest cell count (1,250 cells) occurred in one of the mild cases (group B). All smears showed an increase in cells with a great preponderance of mononuclear cells. The proteins were increased qualitatively in all spinal fluids. Sugar was normal. Spinal fluid cultures were negative. Blood counts, done in all cases, did not show any unusual features. Urinalysis was normal in nearly all cases.

The detailed data of the individual cases are presented in summary in the accompanying tabulation.

COMMENT

There are several phases of the neurologic aspect of mumps which deserve comment. In the first place, the question naturally arises as to the etiology of meningo-encephalitis in mumps. The spinal fluid in these cases was sterile with the ordinary culture methods and when injected into laboratory animals produced no untoward effects. It is generally conceded that the involvement of the central nervous system in mumps is caused by a virus. The mere fact that the virus is not found in the spinal fluid does not negate this conception because in other virus diseases of the central nervous system, such as poliomyelitis and rabies, the virus usually cannot be demonstrated in the spinal fluid, although it is present in the substance of the brain and spinal cord.

Dr. Josephine Neal believes [1] that the mumps virus itself is the cause of the meningo-encephalitis, since the virus of mumps has a tendency to invade tissues other than the parotid gland, and also because the symptoms are less varied than in other forms of encephalitis. However, one may conjecture whether it may not be due to some other virus infection superimposed on a parotitis.

There are two factors to be considered in the apparent increase in involvement of the central nervous system in mumps. First, the diagnosis can undoubtedly be made more often, particularly in mild or symptom-free cases of mumps, by resorting to lumbar punctures more frequently. In addition, Dr. Neal has often stated in her discussions on this subject that the incidence of virus infections of the central nervous system has definitely increased in recent years and that this holds true also for the involvement of the central nervous system in mumps.

As regards the status of the symptom-free group of cases, I suppose one may consider them as subclinical types of infection of the central nervous system. For there undoubtedly must have been some pathologic condition in the meninges or encephalon, or both, to produce the increase in cells and abnormal amounts of protein in the spinal fluids in these cases.

1. Personal communication to the author.

SUMMARY

1. It has been shown that the incidence of meningo-encephalitis in mumps is not as unusual as it was formerly thought to be.

2. Meningo-encephalitis in mumps may occur with very mild symptoms or with no symptoms whatever and, under these circumstances, it could not be diagnosed without a lumbar puncture.

291 Pleasant Valley Way.

JAUNDICE FROM BISMUTH COMPOUNDS USED IN THE THERAPY OF SYPHILIS

REPORT OF THIRTY-TWO CASES

RUBEN NOMLAND, M.D.
IOWA CITY

EDWARD A. SKOLNIK, M.D.
CHICAGO
AND
LAWRENCE L. McLELLAN, M.D.
PHILADELPHIA

Jaundice occurring during the treatment of syphilis has been the subject of a great deal of study. When medication has been thought to be the cause of the jaundice, the arsphenamines have been blamed in almost every instance. Relatively few authorities have suggested that bismuth compounds used in the treatment of syphilis could cause jaundice. Padget and Moore [1] in their two recent reviews of syphilis did not mention bismuth jaundice. Stokes [2] in his textbook also omitted mention of bismuth jaundice. There are a few reports of jaundice occurring after treatment with bismuth compounds, but none go into any detail. In Ruge's [3] review of more than 700 cases of jaundice in patients under treatment for syphilis he mentioned ten who acquired jaundice and had had only bismuth therapy. Langeron [4] observed two cases of bismuth jaundice and cited fifteen reports of the condition made to him personally. He concluded that bismuth is not hepatotoxic, as is arsphenamine, but that it has a non-specific action on the liver previously damaged by syphilis, arsphenamine, alcohol or other agent.

Graffar [5] in his series of 246 cases of jaundice observed seven persons who had received bismuth compounds alone and fourteen more to whom arsphenamine had last been given a year or more previously. He did not discuss the cases of bismuth jaundice. Soffer [6] recently made an extensive study of arsphenamine jaundice. He had a series of 143 cases in which jaundice developed during treatment. Two of the patients had received only bismuth therapy. He also did not discuss the problem, although he considered the possibility that interval treatment with heavy metal was

From the department of dermatology and syphilology and of medicine, Rush Medical College, University of Chicago.

1. Padget, Paul, and Moore, J. E.: Syphilis: A Review of the Recent Literature, Arch. Int. Med. **58**: 901 (Nov.) 1936; ibid **60**: 887 (Nov.) 1937.

2. Stokes, J. H.: Modern Clinical Syphilology, ed. 2, Philadelphia, W. B. Saunders Company, 1936.

3. Ruge, Heinrich: Die Zusammenhänge zwischen Syphilis, Salvarsan, und der sog. katarrhalischen Gelbsucht auf Grund von 2,500 in der Marine von 1919-1929 beobachteten Fällen, Dermat. Wchnschr. **94**: 278 (Feb. 20) 1932.

4. Langeron, L.; Paget, M., and Devriendt, C.: De l'ictère post-bismuthique, Presse méd. **40**: 1189 (July 30) 1932.

5. Graffar, Marcel: Contribution à l'étude des ictères survenant au cours du traitment arsenical, Presse méd. **45**: 661 (May 1) 1937.

6. Soffer, L. J.: Postarsphenamine Jaundice, Am. J. Syph., Gonor. & Ven. Dis. **21**: 309 (May) 1937.

a factor in the cases of late jaundice, that is, those in which the condition occurred three months after the last injection of arsphenamine. About one third of his cases were of the late type. Wile and Sams [7] did not consider bismuth as a cause of jaundice, although all their patients received interim treatment with heavy metal. Presumably this was a bismuth compound, and as almost two thirds of their cases were of the late type, there was probably an adjuvant action of bismuth in their cases of late jaundice.

It is not our intention to discuss the theories of the cause of jaundice occurring during or after treatment of syphilis, because that has been done adequately. It is virtually impossible to differentiate jaundice caused by antisyphilitic therapy from so-called catarrhal jaundice, and bismuth jaundice cannot be differentiated from arsphenamine jaundice. The available evidence indicates that syphilis of the liver and the so-called hepatorelapse are unimportant factors in therapeutic jaundice.

In a large outpatient clinic over a period of five years, jaundice attributed to the treatment developed in seventy-five cases. Extensive study of the cases was not possible, but the criteria for diagnosis were lack of evidence of syphilis of the liver and of other disease of the liver or biliary system, development of the jaundice within a reasonable time after the last treatment and complete clinical recovery. For bismuth compounds the time chosen was six weeks and for arsphenamine twelve weeks.

The jaundice observed could be classified in the following categories:

1. Herxheimer's jaundice (hepatorelapse), with the jaundice occurring within one week after the beginning of treatment of early syphilis with arsphenamine, three.
2. Arsphenamine jaundice, eighteen.
3. Bismuth jaundice, thirty-two.
4. Arsphenamine or bismuth jaundice—jaundice developing while the patient was receiving bismuth but within twelve weeks after the last injection of neoarsphenamine, ten.
5. Unclassified but probably therapeutic jaundice, five.
6. Mapharsen jaundice, two.
7. Tryparsamide jaundice, one.
8. Jaundice from mercury, one.
9. Jaundice from sodium cacodylate, one.
10. Fatal jaundice, two.

Because jaundice from bismuth had been largely unrecognized, we felt that study of these cases was most important.

Our criteria for the diagnosis of bismuth jaundice were lack of previous treatment with arsphenamine, at least within the preceding three months; development of jaundice within six weeks after the last treatment with a bismuth compound; absence of other causes of jaundice, and complete clinical recovery.

The patients with bismuth jaundice numbered thirty-two and could be divided into two groups. The first group, numbering ten, had had no arsphenamine. The second group, numbering twenty-two, had had neoarsphenamine but none within twelve weeks before the onset of the jaundice.

In six of the ten patients who had had only bismuth, the jaundice developed within one week after the last treatment; in three it developed in from one to two weeks, and in one it developed in from two to three weeks.

Of these ten patients one had had from one to ten injections of a bismuth compound, four from eleven to twenty injections, three from twenty-one to thirty injections, and two over thirty injections.

The diagnosis in three cases was cardiovascular syphilis and in one case syphilis of the central nervous system. In two cases it was cutaneous, nodular, ulcerative syphilis and in four cases latent syphilis. There were no cases of early syphilis because in these neoarsphenamine was given as a matter of routine.

In all cases the bismuth preparation was bismuth subsalicylate given in a dose of 1.5 or 2 cc. of the ten per cent suspension in oil at weekly intervals.

Age, sex, race and season of the year did not seem to have any bearing on the incidence of the jaundice.

Of the twenty-two patients who had had neoarsphenamine but whose jaundice was presumed to be caused by bismuth, seven had had their last neoarsphenamine from twelve to sixteen weeks before, three from sixteen to twenty-three weeks before, eleven from twenty-four to thirty weeks before and one over thirty weeks before. Because of the time which had elapsed since the last injection of neoarsphenamine, we felt that it had nothing to do with the jaundice.

Jaundice developed in four patients in the first week after the last treatment; in five, within one to two weeks; in three, within two to three weeks; in four, within three to four weeks, and in five, within four to six weeks.

The amount of bismuth given was from eleven to twenty injections in nine cases, from twenty-one to thirty injections in six and thirty-one or more injections in five.

The diagnosis was secondary syphilis in nine cases, latent syphilis in ten cases, cardiovascular syphilis in one case and neurosyphilis in one case.

In all except three the bismuth preparation used was 10 per cent suspension of bismuth subsalicylate in oil given in a dose of 1.5 cc. Three patients received considerable amounts of an aqueous bismuth compound; namely, bismuth potassium tartrate or bismuth sodium tartrate.

In this group there were a considerable number of patients with early syphilis in whom jaundice developed from three to seven months after their last injection of neoarsphenamine, while they were being treated with a bismuth compound. There was nothing significant in the age, sex, race or seasonal incidence of the jaundice.

The clinical picture in bismuth jaundice is in no way distinguishable from that of other forms of toxic jaundice, such as jaundice from neoarsphenamine, from mapharsen, from sodium cacodylate or from other drugs which may cause jaundice. Our experience is like that of others in that we found no way in which jaundice of this type can be differentiated from acute catarrhal jaundice with any degree of certainty except by the history of the giving of the causative drug.

The severity of jaundice from bismuth was variable, but most of the attacks were mild or moderately severe. Probably the best conception can be given by abstracts of typical case histories:

An example of mild jaundice occurred in a woman aged 34, who had late cutaneous syphilis. She noted yellowness of the eyes nine days after her last injection of bismuth subsalicylate. On physical examination nothing was found except mild yellowing of the conjunctivas and bile in the urine, which was dark. Two weeks later there was no evidence of jaundice, and treatment was resumed.

7. Wile, U. J., and Sams, W. M.: A Study of Jaundice in Syphilis: Its Relation to Therapy, Am. J. M. Sc. **187:** 297 (March) 1934.

An example of moderate jaundice occurred in a man who had late latent syphilis treated only with bismuth compounds. He noted yellowness of his eyes about eighteen days after the last treatment and had mild tenderness in the right upper quadrant. Physical examination revealed icterus of the conjunctivas, and bile was found in the urine. The liver was palpable two fingerbreadths down and slightly tender. After three weeks the scleras and the urine were clear and the liver was not palpable. Treatment was resumed, including administration of a bismuth compound, without untoward incident.

An example of the more severe bismuth jaundice occurred in a man aged 51 with latent syphilis, in whom jaundice developed after his fifteenth injection of a bismuth compound. Sixteen days later he noted that his eyes were yellow and that his urine was dark. A few days later he had chilly sensations, was nauseated, belched and had moderately severe abdominal pain. These symptoms lasted only three or four days. When he was examined at this time, about nine days after the onset, his scleras were markedly icteric, his liver was tender and palpable three fingerbreadths below the costal margin. There was much bile in the urine, with albumin and casts. The stools were light in color but not clay colored. The jaundice remained deep for about thirty days and cleared within two weeks, enduring six weeks all told. The stools were light colored only a few days. When the patient was examined after recovery the liver could not be palpated, the urine was normal and there was no after-effect from the jaundice.

Of the ten persons with jaundice who had had only a bismuth compound, two had mild, five moderate and three severe jaundice. Of the twenty-two who had been given arsphenamine twelve or more weeks and a bismuth compound six weeks or less before jaundice developed, nine had mild, ten moderately severe and three severe jaundice.

The incidence of bismuth jaundice over a period of five years has been one attack for 2,242 injections of bismuth compounds. The incidence of jaundice from neoarsphenamine during the same period has been one attack for each 951 injections. We cannot give figures on the percentage of patients affected, but it cannot be much more than 1 per cent of the number who received adequate treatment for their syphilis. In spite of the fact that there were more cases of bismuth jaundice than of neoarsphenamine jaundice, the incidence per injection of neoarsphenamine was over twice as great.

To those who would question the validity of the diagnosis of bismuth jaundice one can say that the same reasoning is involved in diagnosing this type as in diagnosing other therapeutic jaundice. In general the criteria are recent treatment with the suspected drug, absence of any other cause of jaundice, and clinical recovery which, except in rare cases, is complete.

Forms of therapeutic jaundice cannot, in our opinion, be differentiated from each other except on the basis of the history of the drug used. They cannot be differentiated from so-called catarrhal jaundice. In fact, several authors, especially Ruge, maintain that therapeutic jaundice with syphilis is not primarily from the therapy but follows closely the incidence of simple infectious (catarrhal) jaundice.

SUMMARY AND CONCLUSIONS

Seventy-five cases in which jaundice occurred during therapy for syphilis were studied. In thirty-two the cause was thought to be a bismuth compound. In these thirty-two the jaundice began within six weeks after the last treatment. Ten of the patients had had only the bismuth compound. Twenty-two had had neoarsphenamine, but none within twelve weeks of the onset of the jaundice; in fifteen cases more than fifteen weeks had elapsed since the last treatment with neoarsphenamine. All the patients with bismuth jaundice recovered, and most of them were subsequently given a bismuth compound without its causing harm. In six of the thirty-two the jaundice persisted for six weeks or more.

MESENTERIC VASCULAR OCCLUSION

LORIN D. WHITTAKER, M.D.
Fellow in Surgery, the Mayo Foundation
PEORIA, ILL.
AND
JOHN DEJ. PEMBERTON, M.D.
ROCHESTER, MINN.

Mesenteric vascular occlusion, one of the most fatal of all abdominal catastrophes, arises in a variety of ways and gives rise frequently to bizarre symptoms. This condition most often defies recognition and is treated by various surgical and nonsurgical methods, usually to no avail. Its occurrence is relatively rare and few cases are seen in any one surgical practice. However, in the study of a series of these cases, facts regarding origin and pathogenesis are obtained, predominant symptoms are recognized and types of treatment used may be evaluated, all of which may aid in recognition and management in the occasional case.

The study we are presenting is based on a consecutive series of sixty proved cases seen at the Mayo Clinic, in fifty-seven of which necropsy was performed; in the remaining three cases surgical procedures performed for the occlusion were survived. Cases in which the symptoms and clinical course were suggestive but were not proved by observations at the time of operation or by examination at necropsy were not included in this study.

ETIOLOGY

In this series of sixty patients there were thirty-five males and twenty-five females. The condition was seen most frequently when the patients were at that age in which complications of preexisting disease begin to be manifest, or evidence of degenerative processes begins to appear. The average age of the males was 45 years and the average age of the females was 43 years. The youngest patient was 13 years of age, and the oldest was 83. Mesenteric vascular occlusion in the young was seen more frequently following acute abdominal infections than in relation to any other condition.

There were thirty-six cases (60 per cent) in which mesenteric vascular occlusion was unrelated to any previous surgical procedure and, of this group, only sixteen (44.4 per cent) of the patients were subjected to abdominal exploration; the condition of the remaining twenty patients did not warrant surgical intervention. Of these twenty patients, sixteen were under observation at the clinic for chronic conditions, predominantly cardiac disease (ten cases). In the remaining four cases of the twenty the diagnosis of "acute abdomen" (two cases) and preeclamptic toxemia and cerebral embolus (one case each) had been made elsewhere. Of the sixteen patients subjected to operation several also were under observation at the clinic for various conditions, mostly cardiac disease, at the time the vascular accident occurred. The preoperative clinical diagnoses in these sixteen cases were respectively intestinal obstruction in seven cases, mesenteric thrombosis in

From the Division of Surgery, the Mayo Clinic.

four, abdominal hemorrhage in two (both occurred in women during the second month of pregnancy) and ruptured appendix (present), strangulated hernia (present) and acute condition of the abdomen in one case each.

There were twenty-four cases (40 per cent) in which mesenteric vascular occlusion followed some operative procedure and, of this group, only three patients were subjected to reexploration. The surgical procedures originally carried out in the twenty-one cases in which reexploration was not made included splenectomy for

TABLE 1.—*Mesenteric Vascular Occlusion in the Sixty Cases*

Type of Occlusion and Vessels Occluded		Cases
Arterial occlusion		19
Superior mesenteric	18	
Combined superior and inferior mesenteric	1	
Venous occlusion		27
Superior mesenteric	25	
Inferior mesenteric	1	
Combined superior and inferior mesenteric	1	
Combined arterial and venous occlusion		14

splenic anemia (seven cases), a biliary or pancreatic surgical procedure (four cases), appendectomy or drainage for acute gangrenous appendicitis (three cases), a gastroduodenal operation (three cases), operation on the transverse colon (two cases), herniorrhaphy (one case) and extraction of a cataract (one case). Reexploration was not made either because of the patient's immediately poor condition, or because it was felt that operation offered no hope for recovery. Of the three cases in which reexploration was carried out, in one the reexploration followed an operation on the biliary tract; a volvulus was released on the fifth postoperative day and recovery followed. Thrombosis of the vessels which supplied 2 feet (70 cm.) of ileum had occurred. In the second case, reexploration followed splenectomy for splenic anemia. Enterostomy was performed on the twenty-seventh postoperative day; the jejunum was found discolored. Venous thrombosis continued to the extent of completely blocking the superior mesenteric and portal veins; death occurred on the twenty-ninth postoperative day. In the third case reexploration followed hysterectomy. On the eighth postoperative day an internal hernia through the transverse mesocolon was reduced; the lower part of the ileum was discolored, and thrombosis of the superior mesenteric artery and vein progressed to the extent of complete involvement. Death occurred on the tenth postoperative day.

The mortality rate in this condition is stated to be from 85 to 100 per cent. As has been said concerning the series under consideration here, in thirty-six cases the occlusion was unrelated and in twenty-four cases it was related to a previous operation. Of the twenty-four patients, as also has been shown, three were operated on again in an attempt to treat the occlusion and one survived. Of the thirty-six patients, sixteen were operated on for the same reason and two survived. These three patients were the only ones in the entire group of sixty who survived. Therefore the mortality rate in this entire group was 95 per cent; the mortality rate of patients operated on for occlusion was 84.2 per cent, since sixteen of nineteen died. However, it is to be remembered that the series does not include the cases in which the diagnosis was not definitely proved, the cases in which the patient may have survived surgical operation and in which a definite diagnosis was not established, or those cases in which the patient may have suffered mesenteric occlusion and have recovered without surgical intervention for the occlusion. The types of occlusion and the vessels occluded are given in table 1.

The incidence of involvement of the superior mesenteric artery as compared with that of the superior mesenteric vein compares closely with the relative incidence reported by other authors. Involvement of the inferior artery in one case and of the inferior vein in two cases presents a rather high incidence of such involvement.

The source of mesenteric vascular occlusion varies as to whether the artery or the vein is involved. Superior mesenteric arterial occlusion occurs either because of thrombosis or of embolism. Thrombosis was found more often following operation associated with conditions predisposing to thrombosis, such as splenic anemia and severe grades of arteriosclerosis, than when other conditions were present. Embolism was more frequently associated with degenerative heart disease or with acute valvular disease than with other diseases (table 2). Arteriosclerosis accounted for the occurrence of the case of thrombosis of the superior and inferior mesenteric arteries.

Occlusion of the superior mesenteric vein occurs secondary to ascending thrombosis usually attributable to infectious processes, secondary to descending thrombosis from the associated portal vein or secondary to hepatic disease, or it follows an abdominal surgical operation. Hepatic cirrhosis was noted in some cases of splenic anemia and may have been contributory to thrombosis in these cases following splenectomy (table 2).

PATHOLOGY

Vascular occlusion was complete in each case studied. There was associated thrombosis of the portal vein in eighteen cases (30 per cent) and there existed associated pulmonary thrombosis in seven (11.6 per cent). There was one case in which associated thrombosis of the celiac axis had occurred and gangrene of the mucous membrane of the stomach was observed. Also, in a few cases, old organized nonocclusive thrombi were present

TABLE 2.—*Summary of Source of Mesenteric Occlusion*

Source or Cause	Artery	Vein	Combined Artery and Vein	Total
Cardiac disease	9	1	5	15
Splenectomy for splenic anemia		8		8
Arteriosclerosis	5	1	2	8
Hepatic disease		6	1	7
Acute abdominal infections		6	1	7
Postoperative; abdominal operation	3		2	5
Unknown	1	3		4
Other causes	1	2	3	6
Total	19	27	14	60

in the superior mesenteric vessels, indicating that the patient previously had survived mesenteric thrombosis which was not completely occlusive.

Involvement of the bowel varied in extent from a few inches to include all the small bowel and the right half of the colon. The earliest examinations of the bowel were made from seven to eighteen hours after onset of symptoms and revealed an edematous, congested, deep red or bluish intestinal wall, frequently stretched by distention to a moderate degree and presenting a somewhat granular surface. The mesentery was dark, doughy and thickened as the result of hemorrhage. This is the picture of hemorrhagic infarction of the bowel. Infarction of the bowel is practically always hemorrhagic in

type, as has been shown previously by Dye,[1] Jones [2] and others. Recovery of the bowel is possible early in this stage, but the process usually proceeds rapidly to a state of gangrene. Accompanying this gangrene is bloody ascites and the bowel usually is distended, not with gas but with fluid blood. The bloody ascites is almost pathognomonic of gangrene and is considered by Warren and Eberhard[3] to be probably a transudate from the congested, hemorrhagic, infarcted bowel. The blood within the bowel comes from the gangrenous mucous membrane, that part of the wall of the bowel in which gangrene occurs first in all probability. Considerable blood is lost in this way and manifestly adds considerably to the late shock so frequently seen. Perforation of the bowel was not observed in this series of cases; peritonitis, however, was common, being the end result of the process. Complete gangrene of the bowel with bloody ascites and a blood-filled lumen was seen as early as eighteen hours following onset of symptoms. Rapid progression of the pathologic changes is illustrated by the case of a man aged 54 who had myocardial degeneration and auricular fibrillation. Exploration nine hours after onset of symptoms revealed a dark, edematous jejunum, the changes extending down into the ileum, and necropsy twenty-four hours after onset of symptoms revealed gangrene of the jejunum and of the upper three fourths of the ileum, with bloody ascites and bloodfilled bowel lumen. An embolus of the superior mesenteric artery was present.

Venous thrombosis may start in the fine venous radicles adjacent to the bowel or may originate in the portal vein, but progression of thrombosis is the rule in either the ascending or descending types. Progression of changes in the bowel following venous occlusion is usually not as rapid as that following arterial occlusion.

Recovery probably occurs spontaneously in some cases in which the condition does not proceed beyond an early stage of hemorrhagic infarction. Likewise, recovery may follow complete occlusion of the mesenteric artery by embolism or thrombosis. Dye collected three reports of cases in which recovery from a typical attack occurred, the patients later dying of other causes and, at necropsy, an obliterated superior mesenteric artery being found. Collateral circulation may be established. We have one similar case in our series. A man aged 42 had experienced several previous operations on the upper part of the abdomen. Following drainage of an abscess of the abdominal wall caused by perforation of the jejunum, pylephlebitis of the superior mesenteric vein and portal system developed, with abscesses of the liver, and he died. Necropsy revealed the superior mesenteric artery completely occluded by an organized thrombus. Collateral circulation had been established through the inferior mesenteric and gastric arteries. The intestine appeared normal.

SYMPTOMS AND DIAGNOSIS

One definite symptom complex of mesenteric vascular occlusion cannot be recorded, for there exists a wide variation in the extent of pathologic changes and in the mode of onset. Only a few inches of bowel may be involved, or gangrene of the whole of the small bowel and even of part of the colon may be present. Also there may occur a sudden, prostrating arterial occlusion or a more slowly progressive venous occlusion.

The presenting symptoms are those of an acute abdominal emergency. There are, however, a few symptoms which, if present, are suggestive of mesenteric occlusion. Pain was the most common symptom in our series and occurred in practically every case. When arterial occlusion was present, the pain was described as being sudden, severe and more frequently generalized than localized to the epigastrium. The pain in cases of combined arterial and venous occlusion was similar to that accompanying arterial occlusion, although occasionally it was described as a generalized, dull, cramping pain. Venous occlusion frequently gave rise less suddenly to pain, but the pain was severe and more often generalized than localized to the epigastrium. However, the severe pain of venous occlusion was preceded in a few cases for varying periods of time by a less severe, dull, aching pain. In all three types the pain was more frequently constant than intermittent or cramping in nature.

Vomiting was the next most frequent symptom. It occurred in about 75 per cent of the cases of arterial and combined arterial and venous occlusion and in 50 per cent of the cases of venous occlusion. Vomiting at first was of reflex type and was productive of gastric content only; vomiting was somewhat protracted and the vomitus was contaminated with blood in only three cases (5 per cent).

TABLE 3.—*Surgical Treatment of Mesenteric Vascular Occlusion*

Operation	Cases
Exploration	7
Enterostomy	7
Mikulicz resection	2
Resection and anastomosis	1
Freeing volvulus	1
Reduction internal hernia	1
Total	19

Distention occurred in twenty-nine cases (48.3 per cent); it was considerably more common in the presence of venous occlusion than in that of arterial, or combined arterial and venous occlusion. It usually was of only moderate degree. When the thirty-three cases of arterial and combined arterial and venous occlusion are considered, signs were as follows: The abdomen was described as rigid in seven (21 per cent) and tender in five (15 per cent). The abdomen was tender in only one case of venous thrombosis, and rigidity was not noted in the presence of venous thrombosis.

Constipation was noted much more frequently than diarrhea. Blood was noted most often in the cases of venous thrombosis, either in the stool spontaneously evacuated or following an enema; this occurred in ten of the twenty-seven cases of venous thrombosis, or 37 per cent. When the thirty-three cases of arterial or combined arterial and venous thrombosis are considered, blood was noted in only four cases (12 per cent), making a total of fourteen in the series of sixty cases, an incidence of 23 per cent. Although blood was noted in only 23 per cent of the sixty cases, its presence in the stool spontaneously or following an enema is a valuable diagnostic sign.

Shock was noted in nine of the nineteen cases (47 per cent) of arterial occlusion and in five of the fourteen cases (36 per cent) of combined arterial and venous occlusion but in only two of the twenty-seven cases (7 per cent) of venous thrombosis.

The number of leukocytes was higher than that usually associated with occurrence of other abdominal

1. Dye, W. J. P.: Mesenteric Thrombosis, New England J. Med. **212**: 105-108 (Jan. 17) 1935.
2. Jones, H. W.: Recurring Mesenteric Thrombosis, Am. J. Surg. **22**: 318-320 (Nov.) 1933.
3. Warren, Shields, and Eberhard, T. P.: Mesenteric Venous Thrombosis, Surg., Gynec. & Obst. **61**: 102-121 (July) 1935.

emergencies. The higher values were associated with arterial occlusion, rising rapidly and reaching as high as 35,000 per cubic millimeter of blood within eight hours after the onset of symptoms. The average number of leukocytes recorded in cases of arterial occlusion was 27,000. In cases of combined arterial and venous occlusion the average number was 22,000. In the presence of venous occlusion the range of the number of leukocytes was more variable; the average number was 20,000.

It is probably of academic interest only to discuss points of differential diagnosis between arterial and venous occlusion, for retrograde venous occlusion may follow arterial occlusion and likewise, when venous circulation is blocked, arterial circulation may eventually become occluded. However, discussion of symptoms may help perhaps in recognition of mesenteric vascular occlusion. Pain was severe in the presence of both types of occlusion, more frequently sudden and prostrating in the presence of arterial occlusion, more frequently progressively severe in the presence of venous occlusion. Vomiting was more frequently associated with arterial occlusion, accompanying the severe, sudden attacks of pain. The abdomen in the presence of arterial occlusion was more frequently rigid and tender but much less frequently distended than when venous occlusion was present. Constipation was common to the two but bleeding from the rectum was decidedly more frequent in the cases of venous occlusion. Shock was infrequent when primary venous thrombosis occurred and was frequent when arterial occlusion was present. The number of leukocytes was elevated more consistently and to higher levels in the presence of arterial occlusion than when venous occlusion was present. The usual course of the disease following onset of symptoms varied from eighteen hours to three days; it was probably somewhat more rapid in cases of arterial occlusion.

PROGNOSIS AND TREATMENT

The prognosis of mesenteric vascular occlusion, even when recognized and treated very early, is extremely poor. The poor condition of the patient soon after onset of the condition often precludes surgical intervention and, if the patient is operated on, occlusion and involvement of the bowel are frequently so extensive that resection of the involved portion cannot be carried out with any hope for survival of the patient. Finally, thrombosis may continue to extend after excision of the originally involved segment of the bowel and of mesentery has been accomplished.

In most of the cases of our series the entire small bowel was beyond restitution, even though exploration was carried out as early as nine hours after onset of symptoms. Table 3 indicates the procedures resorted to. Of the three cases in which recovery occurred, resection of the involved portion was carried out in one, release of volvulus was effected in another, and a Mikulicz type of extraperitoneal resection of the involved segment of bowel was performed in the third. These three patients had less extensive involvement than the others. It seems that no one surgical procedure is best and any sound operative procedure in surgery of the bowel is applicable. The extensiveness of the disease, the tendency for thrombosis to progress or to recur following operation and the results of gangrene, namely, hemorrhage and peritonitis, make for the universally high mortality.

SUMMARY AND CONCLUSIONS

In this series of sixty proved cases of mesenteric vascular occlusion, in thirty-six (60 per cent) the condition was unrelated to any surgical procedure and in twenty-four (40 per cent) it occurred following some surgical procedure. Surgical measures were resorted to in treatment of the occlusion in only nineteen cases (31 per cent) with a mortality rate of 84 per cent. The condition of the forty-one remaining patients precluded any hope of surgical intervention. Arterial occlusion occurred in nineteen cases (31.7 per cent), venous occlusion in twenty-seven cases (45 per cent) and combined arterial and venous occlusion in fourteen cases (23 per cent). Cardiac disease, hepatic or splenic disease, arteriosclerosis and acute abdominal infections were the predominant factors in the etiology of mesenteric vascular occlusion.

The symptoms were those of an abdominal emergency. Pain was the most common symptom and was more sudden and severe in arterial occlusion. Vomiting was frequent. Rigidity and tenderness were more common with arterial occlusion, while distention alone was more suggestive of venous occlusion. Bleeding from the bowel occurred decidedly more frequently in the cases of venous occlusion but occurred in only fourteen cases (23 per cent) of the series; it is a valuable diagnostic sign if present. The leukocyte count was elevated to higher levels than that usually encountered in the more frequent abdominal emergencies. The rapidity of progress, the extensiveness of the disease and the tendency for progression or recurrence following operation make for poor prognosis.

Clinical Notes, Suggestions and New Instruments

AN UNUSUAL SHOWER OF FUNGUS SPORES

O. C. DURHAM, NORTH CHICAGO, ILL.

A striking instance of atmospheric transport of vegetable allergens is afforded by the figures for the incidence of Alternaria and Hormodendrum spores on October 6 and 7 throughout the eastern part of the United States. Weather bureau records show that on these two days air masses from the Northwest at elevations of from 2,000 to 6,000 feet moved rapidly southeastward and eastward, covering the distance from Minnesota to the Atlantic seaboard and the gulf in about fifty-five hours. During this time thousands of tons of mold spores were transported an average distance of several hundred miles. At nearly every station on and east of the Mississippi River where records were taken the catch of Alternaria spores during one or the other of the two days of the storm exceeded that found on any other day during the entire summer and fall. Figures were particularly high in Minneapolis, St. Louis, Memphis, Indianapolis, Buffalo and Cleveland, but an acute rise in the spore count was found as far east as New York and Washington, D. C., and as far south as New Orleans. The intensity of the storm can be best appreciated by a comparison of the slide counts for the day of the storm and the average figure for October. At seventeen stations the average increase in the Alternaria spore count during the storm was 100 times that of the mean daily count for the month of October (exclusive of the day of the storm). In the tier of states from Texas to North Dakota the wave of fungus spores was noticeable but not so striking as in the area previously mentioned.

The point of origin of the atmospheric load is somewhat uncertain, but quite likely it was in southern Minnesota. At Minneapolis the deposit on the slide probably occurred early

on the morning of October 6. By the next morning at 8 o'clock the effect had been felt as far east as New York City and as far south as Oklahoma City. During the day and the following night the storm reached Dallas, Memphis, Nashville, Atlanta, Washington, D. C., and New Orleans. It is unlikely that these spores originated locally in each area, because the velocity of surface winds on the dates given was not unusually high. Moreover, it is difficult to believe that a crop of mold spores could have matured in such unusual quantities simultaneously in so large an area.

The figures show the total Alternaria spore count at the various stations on the day of the maximum deposit of these spores during the storm described. The area counted was 1.8 sq. cm. on a petrolatum-coated slide exposed for a twenty-four hour period.

The phenomenon was doubtless due to the transport of mold spores by large air masses rather than by the temporary agitation of locally produced spores. In my ten year study of the behavior of atmospheric pollen I have not observed a transfer of allergen particles so striking in amount or over such a widespread area.

Such a shower of allergen particles can easily account for a sudden exacerbation of hay fever symptoms. A brief inquiry has disclosed the correlation of clinical symptoms with the advent of this storm in some of the places affected.

Abbott Laboratories.

DERMATITIS CAUSED BY DIETHYLENE GLYCOL IN TOBACCO

BEN A. NEWMAN, M.D., LOS ANGELES

P. H., a white man, aged 39, an aviator, complained of a dermatitis of the left index and middle fingers of six weeks' duration and of the left upper lip of four weeks' duration. Two months before, he had been in a hospital for a period of six months because of fracture and amputation of one thigh. He stated that there was no personal or family history of allergy. The eruption was pruritic. It consisted of pinpoint to pinhead size vesicular and scaling lesions on an erythematous base. The borders were ill defined and gradually faded into the normal skin. Wet dressings of solution of aluminum acetate were prescribed for two days, and this was followed by a single fractional dose of superficial x-ray irradiation and zinc ointment U. S. P. Two weeks later the eruption on the fingers was greatly improved but that on the lip remained unchanged. In the meantime an identical eruption had developed on the same fingers of the other hand. Since the patient was an inveterate cigaret smoker and the location of the lesions was the site of direct contact with the cigaret, patch tests were done with the suspected agents. He was tested with the tobacco and paper of the three brands of cigarets he had been in the habit of smoking. A reaction, i. e., vesiculation, was obtained to the tobacco of one brand after forty-eight hours of contact. This was the cigaret containing diethylene glycol and the brand which the patient had started to use only from two to four weeks before the onset of the dermatitis. A subsequent patch test was done with a 5 per cent aqueous solution of diethylene glycol; this test was also applied to two other persons as controls. After twenty-four hours of contact, only the patient showed a positive reaction.

The eruption on the right hand appeared when the patient had shifted the cigaret to those fingers after dressings and bandages were applied to the fingers originally involved. Two weeks after he stopped using this brand of cigaret the patient was entirely well.

SUMMARY

In the case reported, contact dermatitis proved to be caused by diethylene glycol.

3875 Wilshire Boulevard.

Council on Physical Therapy

THE COUNCIL ON PHYSICAL THERAPY HAS AUTHORIZED PUBLICATION OF THE FOLLOWING REPORTS. HOWARD A. CARTER, Secretary.

ACOUSTICON HEARING AIDS (CORONATION MODELS) ACCEPTABLE

Manufacturer: Dictograph Products Company, 580 Fifth Avenue, New York.

Three Coronation Models of Acousticon Hearing Aids, each instrument consisting of a carbon ball type microphone transmitter, a plug-in style carbon-particle type amplifier, a current-varying rheostat, a plug-in type air conduction midget receiver or, interchangeably, a bone conduction type oscillator, and the usual connecting cords and batteries, were examined by the Council. The bone conduction oscillators, the air conduction receivers and the carbon particle amplifiers were each supplied in three nominal frequency ranges, low, intermediate and high; each one of the three Coronation Model hearing aids could be combined with any of the component parts selected at will within the three frequency ranges.

MODEL C-2.—The distinguishing feature of this model is a carbon ball type microphone transmitter, housed in a metal case measuring 2¼ inches across the face and about one-half inch thick. It is finished in lacquered gold on the front perforated face, with a clip on the rear for fastening the microphone to the clothes. A further feature of this model is a separate current-varying rheostat about the shape and size of an average fountain pen cap, also furnished with a spring clip for fastening to the clothes. As already mentioned, the plugs and jacks which terminate the cords furnished may be used to place in circuit any pieces from a threefold selection of

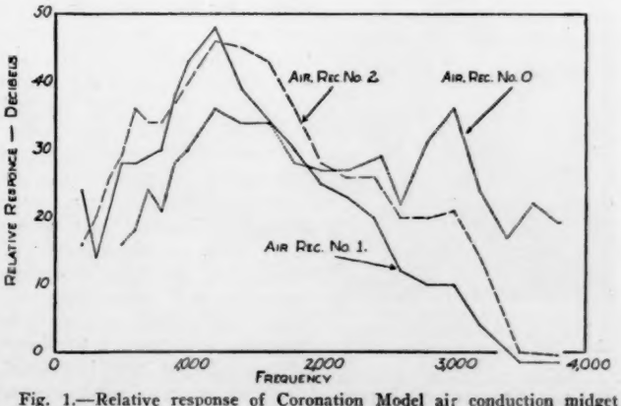

Fig. 1.—Relative response of Coronation Model air conduction midget receivers only.

amplifiers, air conduction receivers having interchangeable form fitting ear pieces or bone conduction oscillators held in place with a spring band, and plug-in type batteries in either 3 or 4½ volt size.

MODEL C-4.—This model is distinguished by a carbon ball type microphone transmitter housed in a molded bakelite case, measuring 3¼ inches across by ½ inch thick, with a semi-

circular projection at one side carrying a rheostat. The front face of the microphone case is perforated in the central region by a number of holes forming together a symmetric pattern. On the back of the case is a spring fastening clip.

MODEL C-6.—This model appears externally to be identical with Model C-4, differing only in that in the front face of the microphone case are indentations for a series of holes near the outer periphery. These are outlined but not punched out as in the Model C-4. In addition, near the center are three small holes about one thirty-second inch in diameter.

All the instruments and components are apparently well constructed and finished. The plugs, bone conduction oscillators and amplifiers are shaped so as to be free from sharp corners and so as to fit together smoothly.

Test Method.—Because of the large number of combinations possible with each of the models and because of the various interchangeable components, it was decided to limit the final and decisive intelligibility, articulation and gain tests to that combination of parts which was best suited to normal human hearing. Accordingly the frequency-response characteristics of the various components were determined separately. The air conduction receivers and the bone conduction receivers, because of the nature of their construction, appear to be stable in their performance. The data obtained may be used to predict what results will be achieved when these parts are used in combination with other components. Figure 1 shows the relative response obtained by using an artificial ear for testing the air conduction receivers as designated by the Dictograph Products Company, numbers 0, 1 and 2. As will be seen from the curves, receiver 0 has the most nearly uniform response characteristic of the three and is the only one which has a considerable output above 3,500 cycles per second. Accordingly, in the final intelligibility tests, only receiver 0 was used.

Intelligibility, Articulation and Intensity Gain

	Sentence Intelligibility, per Cent			Syllable Articulation, per Cent			Intensity Gain, Decibels		
Models*	C-2	C-4	C-6	C-2	C-4	C-6	C-2	C-4	C-6
With 3 volt battery; rheostat full on	93	95	98	54	48	53	10.5	10.5	16
With 4½ volt battery; rheostat ½ on	98	87	91	52	49	46	15.5	9	15
With 4½ volt battery; rheostat full on	93	94	88	44	49	46	26	22	26

* All models equipped with air conduction receiver 0 and carbon microphone 3.

Similar data, not included in this report, were obtained for the carbon particle amplifiers and revealed that amplifier 3 had the most nearly uniform response characteristic. Moreover, it was verified that the combination of receiver 0 and amplifier 3 gave the highest value of sentence intelligibility with any of the three models of microphone transmitters.

Fig. 2.—Acousticon Hearing Aid, Coronation Model.

It is possible that for a person having a hearing loss which varies in a complementary way over the acoustic frequency scale a combination of a different numbered receiver and amplifier would give better overall results for that individual. But when persons with normal hearing are used as observers, the combination stated is the one yielding the most favorable results. Moreover, there is no logical possibility of comparing results so obtained with those obtained from experimentation with persons suffering from hearing defects.

Summary of Results.—Since the three hearing aid models are interchangeable with respect to their other components, the results obtained may be compared when exhibited in tabular form as shown in the table. The tabular values are averages of a great number of separate tests, extending over several weeks, in which eighteen male and seventeen female observers were used both as listeners and as readers. Battery voltages were not allowed to diminish with time but were kept up to the full value furnished by new batteries of large capacity. The gain in intensity shown in the last column of the table should therefore be regarded as the maximum gain obtainable, on the average, by the use of full strength batteries.

It will be seen that the sentence intelligibility is relatively high for all models and for all conditions of use, tending to diminish moderately, however, as the volume is increased through the use of high voltage and larger rheostat currents. Syllable articulation shows the same trend. While the intensity gain is not extremely large even for the highest setting, the fact that the intelligibility keeps to a high value is a good indication that the intensity gain is largely a real loudness gain of usable speech sounds, and not mere noise. It was also directly observed by an overall continuously variable single frequency run that the combination of parts here used was comparatively free from large amplification peaks and noisy admixtures.

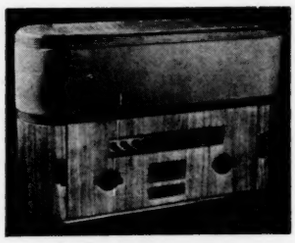

Fig. 3.—Aurogage used for fitting hearing aids.

Bone Conduction Tests.—The three hearing aid models were also tested by using the intermediate frequency bone conduction oscillator, marked with a single white dot by the manufacturer. Only sentence intelligibility tests were performed, since no method of rating the loudness gain has as yet been defined. The results, while not as clearly consistent as for the air condition receivers, nevertheless, gave values comparable to those shown in the table. Also when a 4½ volt battery was used and with the rheostat turned full on, the ears being stopped by wide mouthed jars, there is a distinct and marked acoustic transmission and a hearing gain over that obtained by direct transmission of air borne sounds through the head.

Conclusions.—It is concluded that all three Coronation Models, C-2, C-4 and C-6, when used with the components stated, give satisfactory results both for air and for bone conduction as regards sentence intelligibility, syllable articulation and loudness gain. When used with other combinations of components, the performance cannot be predicted but must be uniquely determined for each individual. Apparently the instruments have been carefully designed, and intelligibility has not been sacrified for an apparent high gain in loudness. The batteries furnished, namely, manufacture numbers 9 and 7, being 3 and 4½ volts battery respectively, also give evidence of careful construction.

In view of the foregoing report the Council on Physical Therapy voted to include the three models, C-2, C-4 and C-6, of the Coronation Acousticon Hearing Aids in its list of accepted apparatus.

AMPLIFYING STETHOSCOPE (MARBEL) ACCEPTABLE

Manufacturer: Marbel Blood Calculator Company, 3267 South Halsted Street, Chicago.

The Amplifying Stethoscope (Marbel) is designed to make audible heart sounds throughout a room or adjoining rooms by means of a loud speaker. The outfit consists of an amplifier, a microphone and a loud speaker. Twenty feet of wire allows the operator to locate the speaker in a convenient place.

This electrical stethoscope enables physicians to hear any irregularities of the amplified heart sounds of patients under surgical anesthesia, and of the mother or the fetus during pregnancy or early stages of labor. It may be used for mass stethoscopic examinations of recruits, factory workers and students.

In order to reach the right amount of amplification, it is advisable for the physician to place the stethoscope-microphone over his own heart and turn the adjusting knobs until the audible sounds are clear. By turning the knobs, the sounds may be made weaker or louder. Care should be exercised in placing the loud speaker, since the microphone and amplifier are highly sensitive and regenerated electrical oscillations may

build up and produce a high squealing sound. If the loud speaker is moved away, the oscillations are not built up so readily. The microphone may be attached with two pieces of adhesive tape to the patient's chest for heart and lungs, to the abdomen of the lying-in patient for the fetal heart, to the arm for blood pressure sounds, or to the bowel for borborgymi above the point of bowel obstruction. Experience is required by the operator to interpret pathologic conditions of the heart.

Investigated in a clinic acceptable to the Council, this stethoscope gave satisfactory service for listening to the heart beats and also amplifying fetal heart sounds before and during the first stages of labor. During the later stages it was not as satisfactory, since difficulty was experienced in keeping the microphone in place.

In view of the foregoing report, the Council voted to accept the Amplifying Stethosope (Marbel) for inclusion in its list of accepted devices.

Council on Pharmacy and Chemistry

REPORTS OF THE COUNCIL

THE COUNCIL HAS AUTHORIZED PUBLICATION OF THE FOLLOWING REPORT.

PAUL NICHOLAS LEECH, Secretary.

NONPROPRIETARY SYNONYM FOR BENZEDRINE AND BENZEDRINE SULFATE

Smith, Kline & French Laboratories inquired concerning the adoption of a descriptive synonym for their trademark, "Benzedrine," since many different terms are being used. At the suggestion of the Council, the firm agreed to adopt the term "alpha methylphenethylamine" as the descriptive chemical name for the substance introduced in therapeutics as Benzedrine. Subsequently, the firm wrote that it understood that when the chemical name is unwieldy a shorter generic name should also be recognized, and suggested "alphametamine" as the coined generic name for alpha methylphenethylamine. The Committee on Nomenclature preferred "amphetamine" to avoid possible misinterpretations of the firm's term. In reply to this suggestion the firm wrote:

"This name [amphetamine] is entirely acceptable to us and we feel that there will be no confusion with any existing names or trade marks."

The Council therefore adopted the name "Amphetamine" as the nonproprietary synonym for Benzedrine, and "Amphetamine Sulfate" as the synonym for Benzedrine Sulfate.

NEW AND NONOFFICIAL REMEDIES

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES. A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION

PAUL NICHOLAS LEECH, Secretary.

BENZEDRINE SULFATE.—Amphetamine sulfate.—Racemic desoxy-norephedrine sulfate.—Racemic benzyl-methyl carbinamine sulfate.—$[C_6H_5.CH_2.CH(NH_2).CH_3]_2.H_2SO_4$.

Actions and Uses.—Benzedrine sulfate is useful in the treatment of narcolepsy, for controlling symptoms similar to those of narcolepsy in the treatment of postencephalitic parkinsonism, in the treatment of certain depressive psychopathic conditions as indicated below and for facilitating roentgenographic studies of the gastrointestinal tract.

Its use is not recommended in the treatment of sleepiness and fatigue in normal individuals because of the possible danger of pressor effects from continued use, because of the dangers of eliminating the warning signal of sleepiness in individuals who are overdoing, because of the possibility of habit formation or addiction from such use and because cases of collapse have ensued when the drug has been used for this purpose. Its use is not recommended for developing a sense of increased energy or capacity for work, or a feeling of exhilaration or as a "pick-me-up" in individuals other than those under the strict supervision of the physician. Its use in depressive psychopathic cases should be confined to patients in institutions, since the dangers involved in the use of the drug for this purpose in those going about their daily tasks are similar to the dangers mentioned in connection with fighting off sleep. It has been used in the treatment of spastic colitis and pyloric spasm and in many other clinical conditions not mentioned above, but its use for these purposes is not recommended at present.

The very nature of the therapeutic effects, as well as the side actions of this drug, requires that its use be promoted with proper caution as to pressor effect, hyperexcitability, gastrointestinal disturbance, restlessness, sleeplessness and in overdosage, chills, collapse and syncope. It should also be carefully noted that the drug is contraindicated in cardiovascular disease, especially when hypertension is a sequence of that disease.

Dosage.—The use of this drug should be instituted with a dose of 10 mg. and increased gradually to 40 mg., depending on the amount needed for therapeutic effect and on the condition in which it is employed. In certain cases it may be necessary to repeat the use of the drug three times daily, but it is recommended that such a dosage not exceed 10 to 20 mg. It is preferable, if possible, to administer the effective quantity of this drug during the morning, to avoid interference with sleep.

Manufactured by Smith, Kline & French Laboratories, Philadelphia, Pa. U. S. patent 1,921,424 (Aug. 8, 1933; expires 1950) 1,879,003 (Sept. 27, 1932; expires 1949) and 2,015,408 (Sept. 24, 1935; expires 1952). U. S. trademark 272,377.

Benezdrine Sulfate Tablets: Each tablet contains benzedrine sulfate, 10 mg. (0.01 Gm.).

Benzedrine sulfate occurs as a white, odorless powder; freely soluble in water, slightly soluble in alcohol; insoluble in ether. Its aqueous solution is neutral to litmus. Benzedrine sulfate melts at over 300 C.

Place 1 Gm. of benzedrine sulfate in an Erlenmeyer flask, add 50 cc. of water and 5 cc. of 40 per cent sodium hydroxide solution; then add benzoyl chloride, 0.5 cc. at a time; shake the flask after each addition; add the benzoyl chloride until no more precipitate forms after an addition; recrystallize twice from 50 per cent alcohol solution, dry the crystals; the melting point is 134-135 C.: the nitrogen content of the benzoyl derivative by the micro Dumas method is not less than 5.70 per cent nor more than 5.95 per cent.

Dry about 0.5 Gm. of benzedrine sulfate, accurately weighed, to constant weight at 100 C.: the loss does not exceed 1 per cent. Incinerate about 0.5 Gm. of benzedrine sulfate, accurately weighed: the residue is not more than 0.1 per cent.

Transfer 0.3 Gm. of benzedrine sulfate, accurately weighed, to a beaker and dissolve in 200 cc. of water and 2 cc. of normal hydrochloric acid. Boil and add 10 cc. of boiling 1 per cent barium chloride solution. Allow to stand overnight, filter, wash until free from chloride, ignite at low red heat to constant weight, cool, and weigh: the sulfate content is not less than 25.5 per cent nor more than 26.4 per cent.

Dissolve 0.25 Gm. of benzedrine sulfate, accurately weighed, in 25 cc. of water in a separatory funnel. Add 3 cc. of 10 per cent of sodium hydroxide solution and extract with six 15 cc. portions of ether. Filter the ether extracts into a glass stoppered flask and shake with 20 cc. of tenth-normal hydrochloric acid. Evaporate the ether on a steam bath; add one drop of methyl red solution and titrate the excess acid with tenth-normal sodium hydroxide solution: the benzyl-methyl-carbinamine content is not less than 72 per cent nor more than 73.5 per cent.

NICOTINIC ACID.—3: Pyridine Carboxylic Acid.—$C_6H_5O_2N$.

Actions and Uses.—Nicotinic acid is accepted for purposes of standardization and clinical experimentation on its use in pellagra.

Dosage.—Experimentally, 0.5 Gm. in five 0.1 Gm. doses daily.

Nicotinic Acid (3: Pyridine Carboxylic Acid)—SMA Co.—A brand of nicotinic acid-N. N. R.

Manufactured by the S. M. A. Corporation, Cleveland. No U. S. patent or trademark.

Vials Nicotinic Acid-Smaco, 5 cc.: Each vial contains 30 mg. of nicotinic acid in sterile physiologic solution of sodium chloride.

Vials Nicotinic Acid-Smaco, 10 cc.: Each vial contains 10 mg. of nicotinic acid in physiologic solution of sodium chloride.

Tablets Nicotinic Acid-Smaco, 20 mg.

Tablets Nicotinic Acid-Smaco, 100 mg.

Nicotinic acid occurs as white, odorless crystals; 0.7 Gm. dissolves in 100 cc. of water at 25 C.; readily soluble in hot water and alcohol, difficultly soluble in ether. An aqueous solution is faintly acid to congo red. The melting point (microscopic melting point apparatus) is 235 C. (rate of heating, 4 degrees in one minute).

Dissolve about 0.05 Gm. of nicotinic acid in 5 cc. of hot water, add 0.05 Gm. of flavianic acid, evaporate carefully to dryness and take up with 5 cc. of cold water; centrifuge the mixture and wash the precipitate three times with 2.5 cc. portions of cold water; recrystallize the solid from 5 cc. of hot alcohol; centrifuge and wash the crystals twice with 3 cc. portions of ether, filter and dry the crystals: the melting point is found to be 249-250 C. (microscopic heating stage-heating time 30 degrees in one minute), $a = 1.498$.

Dissolve 0.05 Gm. of nicotinic acid in 25 cc. of distilled water, add 2.5 cc. of copper sulfate solution 10 per cent: gradually a dark blue precipitate of copper nicotinate forms. Transfer 0.05 Gm., accurately weighed, to a small platinum dish and incinerate: during the charring, a strong odor of pyridine is evolved; the ash is negligible. The U. S. P. XI test for halogens is negative. Transfer 0.1 Gm. to a vessel and dry for five hours, at reduced pressure 2 mm. of mercury in an Abderhalden dryer at 80 C. over phosphorus pentoxide: moisture content should not be more than 0.1 per cent.

Transfer about 0.05 Gm. of nicotinic acid, accurately weighed, to a beaker. Add 20 cc. of boiled distilled water and titrate with 0.1 normal sodium hydroxide, using phenolphthalein as indicator: the alkali used is equivalent to not less than 99.0 per cent nor more than 101.0 per cent nicotinic acid; one cc. 0.1 normal sodium hydroxide is equivalent to 0.0123 Gm.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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SATURDAY, JULY 2, 1938

THE SAN FRANCISCO SESSION

More than 6,000 physicians registered their attendance at the San Francisco session, making this the largest meeting of physicians ever held on the Pacific Coast. Noteworthy features of the meeting were the message of Miss Josephine Roche announcing the National Health Conference, to be held in Washington July 18-20, and the reply of the House of Delegates to that message (see pages 52 and 56), the numerous resolutions concerning the relations of physicians to hospitals and to the public, and the Scientific Exhibit. This exhibit has come to be recognized as a week of opportunities for graduate education not equaled by any similar opportunity available to the medical profession.

Contrary to the expectations of agitators who endeavored to incite disharmony and revolt among the physicians who represent the medical profession in the House of Delegates, the House displayed a singleness of purpose and soundness of attitude in its concern with the important questions which came before it. The fundamental principles adopted at Cleveland were reiterated as basic to a high quality of medical service. The importance of economic factors in a solution of the health problem was emphasized. The importance of education of the public, using all the available means for reaching great numbers of people, was again recognized and the work of the headquarters office toward that end was unanimously approved.

In the scientific sections the attendance was frequently beyond the capacity of even the large halls which had been assigned to them. Moreover, many of the topics which have been in the forefront of medical consideration during the past year were exhaustively considered, including particularly blood dyscrasias, industrial diseases, and new methods in the treatment of psychiatric conditions.

Exhibitors in the Technical Exhibit expressed great satisfaction in the attendance and also in the newness of the audience which they were enabled to reach. This audience included great numbers of physicans from the Pacific Coast and Far Western states who do not frequently have opportunity to attend an annual session of the American Medical Association, with all the varied opportunities for medical advancement that such a session offers.

The medical profession of San Francisco and particularly the officials who were concerned with the arrangements for the annual session deserve the appreciation of all the members of the Association for the efficiency with which they worked. Particularly must credit be given to Dr. Howard Morrow, elected Vice President of the Association, as chairman of the Local Committee on Arrangements. For a year he had been working on the plans for this session. An unfortunate illness made it impossible for him to participate in any of the activities of the week of the annual meeting, but even while incapacitated in bed he kept constantly in touch with the various affairs, ably assisted by two physicans, Dr. Junius B. Harris and Dr. J. C. Geiger, who took care of the details for him.

The many visitors to the annual session, including members of the House of Delegates, expressed almost unanimous satisfaction with the San Francisco session as the most successful medical meeting ever held on the Pacific Coast.

RELATIONSHIP OF VITAMINS TO ENZYMES

The progressive development of knowledge regarding the chemistry and physiology of naturally occurring organic compounds invariably results in an increasing number of demonstrable integrations of the vast body of accumulating information. The final picture thus evolved often provides unexpected chapters in the story of the chemistry of certain of the fundamental processes in the organism. Among the most interesting examples of this situation have been the relationships between certain vitamins of the so-called B complex and some enzymes of prime importance in metabolism.

Several of the enzymes which are concerned in the oxidation and reduction reactions of the cell are conjugated proteins in which the conjugating or prosthetic groups contain one of the vitamins of the B complex. In each of these cases the vitamin, or a molecule of which the vitamin is a part, has been coupled with a protein carrier and the combination exhibits either enzymatic activity or, in certain instances, may be a member of a system which is necessary for the activation of an important enzyme. The three vitamins which are known to exhibit this relationship to enzymes are all members of the B complex. One of these, riboflavin, is a member of the flavin system,[1] an important oxidative chain in the organism. In the flavin system there is present as one member a flavin-containing enzyme which, chemically, is a protein bearer to which is coupled riboflavin phosphoric acid. As another example of the relationship of vitamins to enzymes, one may cite

1. The more recent developments are given in the Annual Review of Biochemistry **6**: 335, 1937.

cozymase, which has a fundamentally important part in fermentation, glycolysis and respiration. This coenzyme contains nicotinic acid amide as a component of its chemical configuration.[1] The significance of the latter compound has been increased by the demonstration that it is probably identical with the pellagra preventive factor;[2] the latter is a member of the vitamin B complex. As a portion of the cozymase molecule, nicotinic acid amide becomes an essential link in the chain of catalysts involved in certain biologic oxidations and reductions. A third example of the role of vitamins in enzyme activity is the association of thiamin with pyrophosphoric acid as a component of an important enzyme system. It has been identified as cocarboxylase, or the coenzyme of carboxylase, the enzyme which appears to be responsible for promoting the anaerobic breakdown of pyruvic acid in mammalian tissue.

Mutual benefits have been derived from the simultaneous expansion of knowledge in the fields of enzymes and of vitamins. The information available regarding the chemical constitution of certain members of the vitamin B complex has greatly facilitated the elucidation of the chemical nature of the prosthetic groups of the flavin enzyme and of cocarboxylase. However, the demonstration that certain vitamins are, chemically, components of biologically important enzymes permits conclusions about the reasons for the indispensability of these vitamins and a demonstration of some of their physiologic functions. It becomes less difficult to explain the requirement of the body for certain dietary components when the latter may be assigned roles as fundamentally important as those relating to the oxidations and reductions which promote the life of the cells.

2. Pellagra and Nicotinic Acid, editorial, J. A. M. A. **110:** 289 (Jan. 22) 1938.

Current Comment

IN HONOR OF LUDVIG HEKTOEN

The issue of the *Archives of Pathology* for July 1938 is a special number dedicated to Dr. Ludvig Hektoen, editor of the *Archives of Pathology* since its inception in 1926, on the occasion of his seventy-fifth birthday, July 2, 1938. The number includes more than fifty contributions, with a total of 448 pages, all of these contributions being written by former assistants or associates of Dr. Hektoen in his many activities. As a Fellow of the American Medical Association, Dr. Hektoen has been especially active as chairman of the Committee on Scientific Research and as chairman of the Committee on Awards of the Scientific Exhibit. He is widely known as a contributor to the literature of medicine, with 307 items listed in his bibliography. His research on antibodies, on fungi, on iso-agglutination and on infectious diseases is recognized throughout the world. Although many men at 75 years of age are content to rest in modest retirement, this seventy-fifth anniversary of Dr. Hektoen's birthday finds him at the peak of a great career as executive director of the National Advisory Cancer Council, under the National Institute of Health. THE JOURNAL tenders him on this occasion the congratulations of the medical profession on his birthday, and best wishes for continued health and many more years of distinguished service.

SMALLPOX IN THE UNITED STATES

According to the statistical bulletin of the Metropolitan Life Insurance Company,[1] the year 1937 witnessed another rise in the incidence of smallpox throughout the greater part of the United States. Reports received during the year indicated 11,806 cases as against 7,044 in 1936. Although the form of the disease now prevalent is mostly mild, the more deadly form might arise at any time. Indeed, such change in virulence has been noted in some epidemics. Curiously, smallpox is much more frequent in some of the less populous states, notably the eight Northwestern states. The better situation existing in the more heavily populated Eastern and Seaboard states was not always as good as it is now. The communities in which smallpox is now so relatively common may suffer a serious epidemic before the unnecessary ravages of the disease are stopped. The number of cases reported and the continued trend upward are a direct reflection of the percentage of unvaccinated among the population

THE TREATMENT OF MALARIA

The Fourth General Report of the Malaria Commission of the League of Nations [1] is especially valuable for its conclusions on the use of the newer synthetic drugs both in treatment and in prophylaxis. The report contains an adequate review of procedures and methods in different countries and it should be read by every one interested in the active treatment or the public health aspects of the disease. Experience has so far shown, the report states, that the eradication of malaria from a community by prophylactic treatment with drugs now available is virtually impossible. It is impossible in this way to reach in sufficient time all the inhabitants of a large area or even of a small village. Moreover, curative or prophylactic treatment may greatly diminish the morbidity, yet it cannot suppress the parasites in all the carriers. With regard to the choice of drugs for curative or prophylactic mass treatment, the report concludes that quinine still ranks first by reason of its clinical effectiveness and almost entire absence of toxicity. In certain circumstances, however, which are outlined in the report, atabrine and plasmochin offer a notable advance in the treatment and prophylaxis of malaria.

1. The Increase of Smallpox in the United States, Statistical Bulletin Metropolitan Life Insurance Company **19:** 3 (May) 1938.

1. Malaria Commission: Fourth General Report: The Treatment of Malaria, Bull. Health Org. League Nations **6:** 897 (Dec.) 1937.

THE PRESIDENT-ELECT— DR. ROCK SLEYSTER

The selection of Dr. Rock Sleyster, Wauwatosa, Wis., to be President-Elect of the American Medical Association, at the annual session in San Francisco, June 16, is a recognition of long and devoted service to organized medicine in the United States. For thirty-five years Rock Sleyster has continuously held a position of service to the medical profession. In 1903 he became secretary of the Calumet County Medical Society, continuing for six years. He was elected assistant secretary of the State Medical Society of Wisconsin and secretary in 1914. He remained as secretary until 1923 and was elected president in 1924. Since 1925 he has been treasurer of the society. From 1918 to 1923 Dr. Sleyster was editor of the *Wisconsin Medical Journal*. From 1915 to 1926 he served as delegate to the American Medical Association and during the last four years of that period was Vice Speaker of the House of Delegates. He became a trustee of the American Medical Association in 1926 and served continuously until June 1937, acting as chairman of the Board from 1935 to 1937. His professional record is likewise inspiring. He was graduated by the University of Illinois College of Medicine in 1902. After practicing medicine at Kiel and Appleton, Wis., he became physician to the prison for the criminal insane at Waupun, Wis. Here he did research, much of which was reported in leading medical periodicals. Later he directed the building of the Wisconsin Hospital for the Criminal Insane and thereafter became medical director of the Milwaukee Sanitarium at Wauwatosa, which position he still holds. He is a fellow and has been a member of the board of governors of the American College of Physicians and a member of the American Psychiatric Association, the Association for Research in Nervous and Mental Diseases, and the Central Neuropsychiatric Association. It is a noteworthy fact in his career that Dr. Sleyster has been unanimously elected to every office which he has occupied, never having been opposed by any other candidate.

ROCK SLEYSTER, M.D.
PRESIDENT-ELECT OF THE AMERICAN MEDICAL ASSOCIATION

RUDOLPH MATAS RECEIVES DISTINGUISHED SERVICE MEDAL

The first medal for distinguished service to scientific medicine to be awarded by the American Medical Association was given to Rudolph Matas, surgeon, of New Orleans, by the House of Delegates in the election held June 13. The recipient of this medal is chosen by a process of selection which insures choice of an outstanding physician and scientist. This year the three names submitted to the House of Delegates after selective elimination of nineteen others were those of Drs. Simon Flexner, Ludvig Hektoen and Rudolph Matas. Dr. Matas was born in Bonnet Carre, La., Sept. 12, 1860, was educated in Barcelona, Paris, Brownsville (Texas) and New Orleans, and was graduated by the Literary Institute of St. John, Matamoros, Mexico, in 1876. He received his degree in medicine from Tulane University in 1880 and has had honorary degrees from Washington University, the University of Alabama, Tulane University, the University of Pennsylvania, Princeton and the National University of Guatemala. He began the practice of medicine in New Orleans in 1880 and has specialized in surgery since 1895, when he became professor of surgery in Tulane University. He has been emeritus professor of surgery at Tulane and consultant at Charity Hospital, New Orleans, since 1928 and honorary chief surgeon of Touro Infirmary since 1935. During the World War he was organizer and director of Base Hospital No. 24. He is a member of innumerable surgical societies throughout the world and at present is president of the Société internationale de chirurgie and honorary president of the International Surgical Congress, which will meet in Vienna next year. He has been decorated by the governments of Venezuela, Spain, France and Cuba. Dr. Matas is recognized as one of the most learned writers on surgery in the world. He is author of many treatises and monographs on surgical subjects, especially in the field of vascular surgery. By this award the American Medical Association indicates its recognition of scientific advancement as one of the main functions of organized medicine.

ORGANIZATION SECTION

PROCEEDINGS OF THE SAN FRANCISCO SESSION

MINUTES OF THE EIGHTY-NINTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT SAN FRANCISCO, JUNE 13-17, 1938

HOUSE OF DELEGATES

First Meeting—Monday Morning, June 13

The House of Delegates convened in the Empire Room of the Hotel Sir Francis Drake and was called to order at 10 a. m. by the Speaker, Dr. N. B. Van Etten.

Preliminary Report of the Reference Committee on Credentials

A preliminary report of the Reference Committee on Credentials was submitted by the chairman, Dr. Deering G. Smith, New Hampshire, who reported that 131 delegates with proper credentials had registered but that the number would be greatly increased before the first session of the House adjourned.

Dr. Smith announced that neither the delegate nor the alternate delegate from Rhode Island was in attendance but that Dr. Roland Hammond, who is the duly elected delegate from the Section on Orthopedic Surgery, had been appointed an alternate delegate from the Rhode Island Medical Society and wished to represent the Rhode Island Medical Society, which would permit the alternate delegate of the Section on Orthopedic Surgery to represent that section. On motion of Dr. Smith, seconded by Dr. A. T. McCormack, Kentucky, and carried, Dr. Roland Hammond was seated as a delegate from the Rhode Island Medical Society.

Adoption of Minutes of Atlantic City Session

It was moved by Dr. A. T. McCormack, Kentucky, seconded by Dr. Arthur J. Bedell, Section on Ophthalmology, and carried, that the House dispense with the reading of the minutes of the Atlantic City session.

On motion of Dr. A. T. McCormack, Kentucky, seconded by Dr. Arthur J. Bedell, Section on Ophthalmology, and carried, the minutes of the Atlantic City Session were adopted as printed.

Roll Call

Dr. Frederic E. Sondern, New York, moved that the roll call of the House be dispensed with since a number of the delegates had not yet completed their registration. The motion was seconded by Dr. George W. Kosmak, New York, and carried.

Distinguished Service Award

Dr. Arthur W. Booth, Chairman, Board of Trustees, reported that the Committee on Distinguished Service Awards had considered twenty-two names for the Distinguished Service Award of the American Medical Association and had submitted five names to the Board of Trustees. The Board of Trustees, in accordance with Chapter VI, Section 5, of the By-Laws, selected by ballot the following names for presentation to the House in alphabetical order: Simon Flexner of New York, Ludvig Hektoen of Chicago and Rudolph Matas of New Orleans.

The Speaker appointed as tellers for this meeting and for all meetings of the House at this session Drs. Francis F. Borzell, Pennsylvania, Chairman; Gunnar Gundersen, Wisconsin; Felix P. Miller, Texas; John Q. Myers, North Carolina, and Carl F. Vohs, Missouri.

The tellers spread the ballot and the Secretary announced that 136 votes were cast, of which Dr. Rudolph Matas received 75, Dr. Ludvig Hektoen 35 and Dr. Simon Flexner 26.

The speaker declared Dr. Rudolph Matas, who received a majority of the votes cast, to be elected by the House to receive the Distinguished Service Award of the American Medical Association.

Official Delegates from Foreign Countries

The Secretary informed the members of the House that Dr. C. H. Vrooman was attending the annual session of the American Medical Association as official delegate of the Canadian Medical Association and that Dr. Charles M. Greenslade would represent the New Zealand branch of the British Medical Association, both of whom would appear before the House later.

Messages of Sympathy

On motion of Dr. J. E. Paullin, Section on Practice of Medicine, seconded by Dr. H. B. Everett, Tennessee, and carried, a message expressing the sympathy and good wishes of the members of the House of Delegates was sent to Dr. Howard Morrow, San Francisco, Chairman of the Local Committee on Arrangements, who was seriously ill.

Dr. A. T. McCormack, Kentucky, moved that the House by a rising vote request the Secretary to send to Dr. E. H. Cary, Texas, who could not attend the session because of illness, its love and congratulations on his progress toward recovery and its regret because of his absence. The motion was seconded by Dr. Arthur J. Bedell, Section on Ophthalmology, and carried unanimously.

Address of the Speaker, Dr. N. B. Van Etten

The Vice Speaker, Dr. H. H. Shoulders, Tennessee, presided while the Speaker, Dr. N. B. Van Etten, read his address, which was referred to the Reference Committee on Reports of Officers:

Members of the House of Delegates:

Centuries ago, in the days of Aesop, an elephant crashing through the woods broke down a small tree in which a bird was sitting on a nest, hovering her young. The mother bird was fatally injured. The elephant was very sorry and apologized in his best manner. The bird with her last expiration begged him to take care of her babies. This the elephant promised faithfully to do and, recalling what he had seen birds do in such an emergency, he carefully turned round and round and sat down on the nest.

Of course the elephant made a mess of it, which is what most of us do when we attempt something for which we have no aptitude or education. It may be presumed that the elephant knew the elephant business very well, but when he tried the bird business he was a little heavy in his technic.

As members of a great organization do we know our business? Are we properly mixing our sociology with our medicine? Are we really altruistic or are we dominated by a mass of individual economic desires? Are we "money mad doctors," as we are advertised on the cover of a June magazine? Are we thinking individually or collectively? Are we so interested in the science of medicine that we are losing a human interest in its application? Do we want more or better medical schools? Do we want more or better educated physicians? Do we want medical education controlled by organized medicine or by government bureaus? Do we, or do we not, correctly interpret the opinions of the medical profession of the United States? Are we so conservative that we are insensitive to social currents?

These questions are inspired by current criticism.

"Organized medicine is doomed," says one, unless it is "democratized." Notice has been given that we are to be investigated, excoriated, flagellated and perhaps excommunicated. It seems obvious that all this shooting is inspired. Why and by whom? Have we definitely departed from democracy? The American Medical Association was created for the

protection of the public from the misrepresentations of charlatans and quacks, for the promotion of the science and art of medicine and for the betterment of the public health. Are we carrying on in the spirit of the founders?

The American Medical Association is the largest medical organization in the world. Its technical setup is democratic by any test. Any member, anywhere, at any time may express himself on any subject with the greatest freedom before his county medical society, and if he meets approval there his opinions may travel to the larger audience of his state medical society and then to this House of Delegates for decisive action.

Evolutionary changes are inevitable, but representing, as you do, all of our states and territories, these changes are not likely to be revolutionary responses to the excitement of occasional individuals among our more than 109,000 members, or servile responses to inspired propaganda. When county societies become interested in new medical service plans and transmit their ideas to state societies, which in turn send them to your sessions, you will discuss them as you have always done, and when a majority of you approve them they will be adopted and carried out by your executives.

By constitutional provision "The legislative powers of the Association reside in the House of Delegates. The House of Delegates shall transact all business of the Association, not otherwise specifically provided for in this Constitution and By-Laws, and shall elect the general officers."

You elect the officers and trustees and they report to you. They do not originate policy. You make the policies, and the officers and trustees are obligated to execute them. If your policies are not carried out to your satisfaction, you may replace your officers. On your shoulders rests the fate of American medicine. Every practitioner of medicine looks to you, and back of these practitioners are millions of people who are daily looking for the best in medical care, not merely adequate care or just any medical care that may be promised by paternalistic bureaus, but a constantly improving medical care that a constantly improving medical profession may offer them.

There can be no autocracy where final decisions rest within a house composed of 175 delegates. There is no dictator among your officers. There is no dictator among the trustees to whom you delegate the care of your money. There is no policy which you may not reverse. You have the power and you have the responsibility. As delegates from constituent bodies it is your duty to report the action of this house to your membership. Judging from the lack of knowledge of the Association among physicians, and judging from the amount of misrepresentation about the American Medical Association which constantly appears in public print, it seems evident that you do not sufficiently exercise intelligent interpretation of the Association to your members at home.

If this great Association is a blundering elephant, remember that you are riding him.

If this great Association is unresponsive to the will of its membership, remember that you may have failed to bring the thought of your constituents to this forum. This is a great association. The Scientific Assembly became so large that you divided it into sixteen sections, where every specialty may be discussed in the best possible manner and where there is ample opportunity for the voice of modern medicine. Other medical societies employ different technics. It is within your province to develop other models if you wish. Your Judicial Council, your Council on Medical Education and Hospitals and your Council on Scientific Assembly are standing committees of the Association and they report to you.

A delegate raises the objection that the sessions of the House are too short to digest properly questions which arise from resolutions that are presented, and that hasty judgments are likely to result. Your councils meet throughout the year. You may appoint special committees to carry on continuous studies as you have done in the past, and finally you may call special sessions to meet a serious need.

You are amply implemented by your Constitution and By-Laws. If you are unhappy about the conduct of the Association you have only yourselves to blame. Your Speaker makes no recommendations. He has restated your powers to renew your consciousness of them and to stimulate their faithful exercise.

Your Speaker is gratefully appreciative of the unvarying courtesy of this legislature and as the time has come for him to retire from official places he does so with sincere regret that he will miss his contacts with you. He has faith in the success of the medical profession in riding out disgruntled criticism, and he believes that the general sanity of the American people will lead them to support an honest medical service such as is offered by the American Medical Association.

NEW MEMBERS

Twenty-two delegates are here for the first time. In order that they may be properly identified, I will ask them to rise and remain standing while all their names are called:

Arkansas, Edward E. Barlow; California, J. P. Nuttall; Delaware, William H. Speer; Illinois, R. K. Packard; Indiana, George R. Dillinger; Iowa, A. D. Woods; Massachusetts, Edward L. Merritt, David D. Scannell, Dwight O'Hara, Walter G. Phippen; Michigan, L. G. Christian; Missouri, H. L. Kerr; Nebraska, Karl S. J. Hohlen; New Jersey, Andrew F. McBride, S. T. Snedecor; New York, Robert F. Barber, James M. Flynn, James R. Reuling Jr., Louis H. Bauer, George F. Newton; Ohio, John B. Alcorn; Vermont, B. F. Cook; West Virginia, Ivan Fawcett; Philippine Islands, Henry W. Daine; United States Army, Roger Brooke; Section on Preventive and Industrial Medicine and Public Health, R. R. Sayers.

I desire to give you a hearty welcome and an assurance that you will be recognized when you rise and that your communications will have a hearing. In common with all the members of this house, you are instructed to follow your resolutions to the sessions of the reference committees. All reference committees will meet immediately after the close of this session for organization, and all delegates are assured that the committee rooms will be open for free discussion of all referred matters.

Since the last session at Atlantic City, in June 1937, many former officers or members of the House of Delegates have gone beyond our vision. The reading of their names will awaken personal memories. The dates following their names indicate their years of service.

A. H. Barkley, Kentucky, 1914.
Walter J. Barlow, California, First Vice President, 1911.
L. G. Bowers, Ohio, 1926.
Walter V. Brem, California, 1923.
E. D. Clark, Indiana, 1907.
Blase Cole, New Jersey, 1937.
Elmer B. Coolley, Illinois, 1918.
Rufus J. Coultas, Illinois, 1912-1913, 1918-1920.
William E. Darnall, New Jersey, Fourth Vice President, 1914.
John P. De Witt, Ohio, 1923-1937.
L. C. Feemster, Mississippi, 1915.
Willard D. Haines, Ohio, 1921-1924.
J. N. Jenne, Vermont, 1908, 1910, 1929.
Daniel Fiske Jones, Massachusetts, 1921.
William H. Kennedy, Indiana, 1926.
Samuel E. Lambert, Washington, 1920-1921.
Edgar J. March, Ohio, 1911-1912.
A. C. Messenger, Ohio, 1924.
W. W. Lazarus, Pennsylvania, 1932.
Henri P. Linsz, West Virginia, 1918, 1920-1930.
Theodore P. Livingston, Nebraska, 1909.
F. A. Long, Nebraska, 1907-1908, 1911.
J. Curtis Lyter, Missouri, 1922, 1924-1925.
Walter J. Miller, Tennessee, 1903, 1905-1906.
William L. Noble, Illinois, 1912, 1914-1915.
Guy S. Peterkin, Washington, 1909, 1915.
William M. Robertson, Pennsylvania, 1916.
Dunbar Roy, Georgia, 1910-1911, 1914.
Samuel Wolfe, Pennsylvania, 1907-1910.
George H. Scott, U. S. Army, 1933.
George L. Strader, Wyoming, 1908.
Harry V. Wurdemann, Washington, 1902, 1906, 1914.
George H. Simmons, Chicago, Secretary, 1900-1911; Editor, 1903-1911; Editor and General Manager, 1911-1924; Editor and General Manager Emeritus, 1924-1937.

Dr. Simmons attended the sessions of the House last June and was present at the delegates dinner. He exhibited much of his old enthusiasm for the Association, for the success of which he was largely responsible. His sanity and loyalty are needed today. He will be long remembered.

"As life runs on, the road grows strange
With faces new, and near the end
The milestones into headstones change
'Neath every one a friend.
—James Russell Lowell

At the request of the Vice Speaker, the members of the House rose and stood for one minute in silent tribute to the memory of departed delegates.

Reference Committees

The Speaker presented the following names of members of Reference Committees:

SECTIONS AND SECTION WORK

Robert A. Peers, Chairman.....California
Arthur J. Bedell.....Section on Ophthalmology
Burt R. Shurly.....Section on Laryngology, Otology and Rhinology
Edward H. Skinner.....Section on Radiology
Tom B. Throckmorton.....Section on Nervous and Mental Diseases

RULES AND ORDER OF BUSINESS

W. H. Seemann, Chairman.....Louisiana
Lewis B. Bates.....Isthmian Canal Zone
Edgar A. Hines.....South Carolina
J. Newton Hunsberger.....Pennsylvania
Roland Hammond.....Rhode Island

MEDICAL EDUCATION

William D. Johnson, Chairman.....New York
John W. Amesse.....Colorado
J. C. Flippin.....Virginia
McLain Rogers.....Oklahoma
Walter E. Vest.....West Virginia

LEGISLATION AND PUBLIC RELATIONS

Terry M. Townsend, Chairman.....New York
W. Albert Cook.....Oklahoma
Charles A. Dukes.....California
Henry Cook Macatee.....District of Columbia
Walter B. Martin.....Virginia

HYGIENE AND PUBLIC HEALTH

H. B. Everett, Chairman.....Tennessee
Charles H. Goodrich.....New York
J. F. Hassig.....Kansas
Charles S. Skaggs.....Illinois
Joseph F. Smith.....Wisconsin

AMENDMENTS TO CONSTITUTION AND BY-LAWS

H. A. Luce, Chairman.....Michigan
Herbert L. Bryans.....Florida
George P. Johnston.....Wyoming
Charles J. Whalen.....Illinois
Raymond L. Zech.....Washington

REPORTS OF OFFICERS

J. N. Baker, Chairman.....Alabama
Elbridge J. Best.....California
Ben R. McClellan.....Ohio
Richard H. Miller.....Massachusetts
Arthur C. Morgan.....Pennsylvania

REPORTS OF BOARD OF TRUSTEES AND SECRETARY

Frederic E. Sondern, Chairman.....New York
Clyde L. Cummer.....Section on Dermatology and Syphilology
John H. Fitzgibbon.....Oregon
Fred W. Rankin.....Section on Surgery, General and Abdominal
Felix J. Underwood.....Mississippi

CREDENTIALS

Deering G. Smith, Chairman.....New Hampshire
R. W. Fouts.....Nebraska
James R. McVay.....Missouri
William H. Myers.....Georgia
William R. Molony Sr.....California

MISCELLANEOUS BUSINESS

Fred Moore, Chairman.....Iowa
E. S. Hamilton.....Illinois
Walt P. Conaway.....New Jersey
F. S. Crockett.....Indiana
E. L. Henderson.....Kentucky

On motion of Dr. A. T. McCormack, Kentucky, seconded by Dr. Arthur J. Bedell, Section on Ophthalmology, the House consented to the appointment of a Reference Committee on Executive Session.

EXECUTIVE SESSION

J. D. Brook, Chairman.....Michigan
W. F. Braasch.....Minnesota
William R. Brooksher.....Arkansas
Don F. Cameron.....Indiana
Meredith Mallory.....Florida

SERGEANTS AT ARMS

Holman Taylor.....Texas
Howard C. Frontz.....Pennsylvania

Address of President J. H. J. Upham

The Speaker resumed the Chair and presented the President, Dr. J. H. J. Upham, Columbus, Ohio, who delivered the following address, which was referred to the Reference Committee on Reports of Officers:

Mr. Speaker and Members of the House of Delegates:

The opportunity of visiting many state and district medical society meetings in practically all sections of the country has given me three outstanding impressions concerning the state of medicine and medical organization in this country:

First is the evident desire, even avidity, of the general membership of the medical profession for self improvement in the newer developments of medical knowledge. This is evidenced by the great number of medical societies at present in existence providing programs to meet all varieties of medical practice. There are at the latest listing 100 national special societies holding yearly meetings. In addition there are numerous district meetings of similar character, to meet the demands of sectional areas. These are purely scientific assemblies, and the opinions and expressions of the members attending have a weight and authority that are duly acknowledged if confined within the bounds of medical science.

When, however, such societies take action on matters of medical policy, or officers of these organizations seize the opportunity to attract public notice by expressing personal opinions outside the real scope of the society, they collectively or individually arrogate to themselves an authority and importance that cannot be conceded by the rest of the medical profession—echoes from the public press to the contrary notwithstanding!

Added to these special societies are the regular state and county meetings, the hospital staff gatherings, the growing practice of postgraduate assemblies for the alumni of many colleges, and the postgraduate courses carried on by several state associations. One cannot but wonder whether this activity is not being somewhat overdone, and yet from a questionnaire sent to cross section areas the attendance of members reported was remarkably good and a review of a large number of programs shows a catering to a high plane of medical thought. One must feel therefore that the supply is in response to a definite and a general demand.

A second impression is of the awakened interest of our membership in the present social and economic questions confronting the country as a whole and especially those connected with present day medical practice. Ten years ago the average practitioner accepted the care of the indigent as a professional duty and an accepted duty. The great depression, however, made this burden too great to be carried further by our profession alone and forced collective thinking of ways and means of meeting the situation. In every state and in almost every county the various phases of this problem are being discussed. The best thought of our members is being given to meeting the difficulties in their respective areas. Furthermore, it is my distinct feeling that the activities manifested are not the result of fear of the imposition of any European scheme of socialized practice but rather an aroused consciousness of the part organized medicine should play in seeking to solve the present economic problems in relation to illness. Allied to this is the manifest determination to preserve the individual type of medical practice as that best suited to this country, and to maintain that practice on the highest possible plane.

In the current effort to secure definite and countrywide information as to needs of medical care and the supply at present existing in every community, the American Medical Association has assumed a leadership in constructive thought that is a noteworthy contribution. When the basic facts are established a long step will have been taken in the direction of solving some of these many grave problems. One concrete evidence of this arousing of the members of our profession, and in their feeling that our greatest hopes lie in a united profession, is the remarkable increase in membership of this Association. The latest report shows 109,435 actual members. This is our emphatic response to the press reports of dissension in our organization.

The third impression is that of the awakening of our membership to the obligations of medicine and medical practice. The scientific investigations of fifty years ago laid the foundation of preventive medicine. The record of progress made in these fifty years is one of wonderful achievement. It has led to the grouping of physicians into those occupied chiefly in scientific research, those engaged in public health work or preventive medicine, and the remainder in curative practice.

The developments of recent years have shown that social and economic conditions are inseparably intermingled with health and sickness. There are factors beyond the ability of physicians alone to supply that enter into many present day problems. This was first shown on a large scale in the nine-

ties as a result of the worldwide interest in tuberculosis following the discovery by Koch of tuberculin. Before that time tuberculosis was practically relegated to the medical profession, but with the focusing of attention on this, the then greatest single destroyer, there developed the need of improved sanitation, protection of the workers in industry, the providing of opportunity for prolonged periods of complete rest, proper nourishment and particularly the education of the public, especially of those in contact with the disease. The enlistment of intelligent and interested members of the public in cooperation with members of our profession has led to gratifying results in forty years and this must be continued for many years to come.

Following this lead we have seen similar campaigns against cancer, heart disease, maternal and child welfare, and lastly the recently inaugurated campaign against syphilis. These movements are the result of an aroused public interest. They are an inevitable product of modern civilization, and the medical profession cannot stand aloof. It is of great importance that organized medicine take cognizance of these movements, not necessarily officially, but through physician members with the medical point of view to guide these organizations along the lines of procedure most advantageous to the actual and prospective individuals affected and for the public as a whole.

This fight against syphilis parallels that of tuberculosis in many ways, especially in the need of popular education and the stressing of the value of prolonged treatment. Particularly in these fields is wisely directed public effort of value. In the campaign against syphilis there are certain advantages over that against tuberculosis, in that syphilis is not so disabling in the early stages, does not require sanatorium treatment and is not connected with industrial hazards or insanitary living conditions. It is, however, so dependent on fundamental human frailty that it is almost equally difficult to control.

While we possess a specific cure for syphilis if adequate treatment is given, it is beyond the power of the medical profession to meet the demand alone. The present agitation is a definite challenge to our profession which must be met squarely. Through cooperation with lay efforts, popular education may be wisely directed and efficiently carried on. The tabu of silence has already been broken, and early and prolonged treatment is being stressed by both lay and medical workers. This is of great importance but after all is but preliminary or auxiliary to the real task of treatment, which is definitely our field and our responsibility. One might think superficially that this is the major concern of the syphilologists and genito-urinary specialists, but the number of individuals affected is so great and their distribution so wide, many living in rural areas not accessible to specialists, that the general practitioner must play an important part in the program.

The necessary expense of prolonged treatment is also a factor which makes this necessary. As is usually the case, the extremes of society, the high and the low, are not affected. The upper classes can take care of the costs of specialists, and the indigent are being cared for, partially at least, by dispensaries or clinics, with many of the state or local boards of health supplying the necessary drugs. In areas not at present supplied, this could be supplemented by plans worked out by representatives of the county medical society, the local board of health and the community fund or other social agency to form a joint governing body to open treatment centers, the medical group to furnish the medical personnel and be responsible for the treatment, the health board to furnish the drugs and supplies and the social agency to investigate the social status of the clientele and carry on follow-up work.

The middle class in general may be cared for effectively by the general practitioner, but the lower middle class and those on the borderline of medical indigence constitute a serious phase of the problem. Many refuse to go to a free clinic but are deterred from seeking adequate treatment because of the expense. Some of these patronize quick-cure charlatans or buy worthless quack remedies. In view of the greatly simplified modern technic our medical societies in many places are meeting this issue by mutual agreement of the members to charge these individuals fees commensurate with their circumstances, particularly remembering the long period required for adequate treatment. A plan might be drawn by the composite governing body I have mentioned that would include the furnishing of drugs and supplies for those reluctant to go to a free clinic but able to pay a small fee for the actual service of the physician. In this way the self respect of these patients may be preserved and many saved the devastating effects of ineffectual or practically worthless treatment.

In view of the wide publicity given the antisyphilis movement and the necessary part in it that the medical profession must play, the attention of the state and county societies should be drawn to the opportunity of assuming a definite leadership in the respective states and counties, and of directing the movement with the best ideals of medicine and for the best interests of the public.

Address of President-Elect Irvin Abell

The Speaker presented the President-Elect, Dr. Irvin Abell, Louisville, Ky., who delivered the following address, which was referred to the Reference Committee on Reports of Officers:

Mr. Speaker and Members of the House of Delegates:

As your President-Elect it has been my duty and my privilege to attend the deliberations of your Board of Trustees and many of the district and state association meetings throughout the country. The most lasting impression I have gained from these widespread contacts is the sincere desire of the members of the American Medical Association to preserve our system of medical care and at the same time to make its benefits available to all classes of our population. Differences of opinion there have been and will continue to be as to the best method of accomplishing the latter aim, but I have found nowhere basis for the unwarranted accusation that organized medicine as a whole is static and obstructive. True it has opposed, does now oppose and will continue to oppose proposals that tend to lower the standard which it has set on medical service; namely, that it be good medical service. By no possible deduction can this be interpreted as a selfish action, one that would inure to our own aggrandizement. By tradition and heritage we are committed to the principle that the sole reason for the existence of our profession is the service it can render humanity. The highest service it can render the people of this country consists not only in healing the sick and preventing disease but in preserving that system of practice, evolved through years of studious and unselfish effort, which has given to the people of the United States the lowest morbidity and mortality rates of any country in the world.

The members of the Association have welcomed with enthusiasm the resolutions adopted by the Board of Trustees following a meeting in which representatives of the American Public Health Association and the United States Public Health Service participated. They see in this an opportunity to continue the constructive service of organized medicine to the people in solving the problem of a wider distribution of medical service without sacrificing or compromising the principles and precepts which are recognized as essential to good medical care. While our critics have rather vociferously demanded a plan, our membership, with a better understanding, an accumulated knowledge and a broader experience bearing on the problem than any other interested body, has wisely refrained from making a "snap diagnosis" with its inevitable inaccurate "therapeusis" until the needs for medical care and preventive medicine can be precisely known.

In any consideration of the indigent and the low income groups, social and economic factors play parts of equal importance with medical care. It is essential that the reciprocal relations of each be given careful consideration, to the end that medical and professional standards do not suffer as a result of projected experiments in legislative planning for socialization in various fields. The medical profession, from prolonged and intimate observation, is fully cognizant of the social and economic needs that lie so heavily on the indigent and the low income groups. While willing to do its share in their rehabilitation, the medical profession does not feel it within its power or province to initiate or sponsor measures looking toward social and economic reformation. At the same time it resists efforts and proposals that would include and regiment its services under lay control to the accomplishment of these ends.

There is no definite means of computing in monetary valuation the services voluntarily rendered to the indigent and low income groups by the medical profession during the past eight years. From such data as are available a fair estimate based on a minimum fee schedule would place the valuation in the neighborhood of a million dollars a day, a contribution not equaled or exceeded by any agency other than the federal government.

Surely this offering for the public good would indicate that medicine has more than fulfilled the obligation implied in its Principles of Medical Ethics to give of its services to the needy and that as a profession our ideal and our aim have been the provision of service rather than solicitation for compensation. The fact that the requirement and demands of the indigent and low income groups have reached such proportions as to constitute a load beyond the capacity of the profession to absorb and carry has brought to the fore the proposal that these needs be met by the application of federal funds. If such a change is to come, it is essential both for the future progress of medicine and for the welfare of the groups to be served that the distribution and direction of such funds be made neither under political control nor under lay domination. The health of the nation should neither be made the football of politics nor consigned to the fallacious judgment of those who, regardless of their sincerity of purpose, are untrained in the intricacies of its care. With accurate knowledge concerning the variations in the availability of medical service and in the facilities for its dispensation and as well in the demands for such in every county in the country, it will be possible for the Association to evolve methods that will make possible the provision of care to those unable to provide it themselves.

The economic level in the states and counties ranges all the way from opulence to poverty; many are abundantly able financially to meet their obligations to society, including the care of their indigent; some are apparently so poor that they are unable to meet the expense of their local governmental activities. The problem of medical care in the former group does not present the complexities found in the latter, and, while the provision of medical care to it will meet a humanitarian impulse, it will not alone solve its problems.

It is difficult for us to understand the attitude of the socialistically minded statesmen who would supply this group with medical care at governmental expense with a lowering of the efficiency, and perchance integrity, of a part of the medical profession and without providing for the beneficiaries a standard of living that would maintain their own respect as free American citizens. The American people are not willing to accept a collectivist or communal society. There are assuredly no good grounds to assume their volition to subject the medical profession to such an experiment. When the suggestions of this House of Delegates based on the study undertaken by the Association will have been presented to the public, the thoughtful will have concrete evidence that we have not been recreant to the faith reposed in us but that with a fortitude developed from the accomplishments of the past we stand ready to salute a more splendid future.

A second matter of widespread interest concerns graduate education, a problem that fortunately is well under way to solution under the direction of the Council on Medical Education and Hospitals, its objective being to improve the qualifications of physicians and thereby to enhance the quality of medical service. The growth and development of knowledge in the art and science of medicine during the present century have been unprecedented: its accumulation has been so rapid and so extensive as to upset all previous conceptions as to both the acquisition and its distribution. Not only is the recent graduate perplexed in preparing himself for a career in medicine, but the graduate of some years who has not kept abreast of the current finds himself wofully lacking in the newer knowledge and procedures, with a consequent failure in understanding of their principles, application and usefulness. The American Medical Association, in consonance with its aim of maintaining a high standard in medical practice, has always insisted that the quality of medical care be good. To be good it must embrace and utilize the constantly accumulating fund of knowledge accruing from study, from research, from clinical investigation and from scientific evaluation of all that is proposed for its advancement. The newer knowledge, thoughts and concepts meeting these requirements are so great that graduate medical education has forged to the front as one of the important problems confronting the profession today. It presents two phases, one dealing with the preparation and training of specialists, the other dealing with the continued education of those who are not specialists. Because of the enormous elaboration of the details of medicine, as of other sciences, there has been a corresponding growth of specialism in medicine and in research. Twelve examining boards have been created for the certification of specialists in their respective fields, which demand of the candidate requisite training and a demonstration of efficiency before the stamp of approval as specialist, attesting the attainment of skill and knowledge, may be obtained. Medical schools and hospitals are utilized in the graduate training of specialists, while the schools, the hospitals and the state medical associations cooperate in providing opportunities for the further training of those who are not specialists. The entire problem of graduate education is at present being made the subject of intensive study by the Council on Medical Education and Hospitals with the objectives of developing opportunities for its acquirement, establishing criteria for the schools and hospitals engaging in it, and formulating programs and courses of study for those desiring to take advantage of it.

The scientific trends of American medicine, as evaluated by the contributions of the past year made in the component units of the American Medical Association and in its literature, can be viewed with optimism. Remarkable advances and progress are being charted in every field, but the words of Dr. George Shattuck, uttered as far back as 1866, still hold true: "No one can deny or doubt that we have made and are making great advances, but the horizon opens before us as we go on, and the extent of the field becomes even more apparent than our progress."

REPORTS OF OFFICERS

Report of the Secretary

Dr. Olin West presented his report as Secretary, which was referred to the Reference Committee on Reports of Board of Trustees and Secretary, with the exception of that portion dealing with proposed amendments to the Constitution, which was referred to the Reference Committee on Amendments to the Constitution and By-Laws.

Report of Board of Trustees

Dr. Arthur W. Booth, Chairman, presented the report of the Board of Trustees, which was referred to the Reference Committee on Reports of Board of Trustees and Secretary, except those portions referring to the Bureau of Legal Medicine and Legislation and to the Bureau of Medical Economics, which were referred to the Reference Committee on Legislation and Public Relations, and that portion referring to contraceptive devices, which was referred to the Reference Committee on Executive Session.

In addition to the report of the Board of Trustees as printed in the Handbook, Dr. Arthur W. Booth, Chairman of the Board of Trustees, presented the following supplementary report:

REQUESTS FROM THE AMERICAN RED CROSS FOR APPROVAL OF ITS MEDICAL POLICIES IN DISASTER

The following statement of the medical policies of the American Red Cross in disaster was submitted to the Board of Trustees by the medical adviser, William De Kleine, with a request for approval by the Association and is referred to the House of Delegates for its consideration:

SECTION VII. MEDICAL AND NURSING SERVICE: I. POLICIES

The primary responsibility for the care of the sick and injured in disasters rests with the local physicians. Red Cross medical service does not substitute for the services of local physicians and dentists but cooperates with them and assists by organizing and directing the medical relief work and by providing the facilities which they lack and need for the emergency.

Every effort is made to maintain, and reestablish as quickly as possible, the predisaster relationships between physicians and dentists and their patients. In the first few days it is often necessary to apply aid on a mass basis in emergency medical stations. This practice is discontinued as soon as possible and patients referred to their own physicians and dentists.

Red Cross medical and dental assistance is intended only for those who are ill or injured because of the disaster and who because of lack of resources are unable to obtain care. Exceptions may be made in certain emergencies (obstetrics, for example) when medical service is not otherwise available.

If possible, the Red Cross medical officer after completing his first survey, otherwise the director, should confer with local physicians, dentists and hospital officials, preferably through the local medical and dental societies, to explain Red Cross medical policies and procedures.

It is hoped that physicians and dentists, like other community leaders engaged in various phases of disaster relief work, will give their services on a volunteer basis for patients unable to pay. On approval of the director, actual expenses incurred and cost of supplies used by physicians and dentists may be paid those volunteering their services. Physicians should not be paid for work during the emergency period unless they have been previously employed for that purpose. The Red Cross recognizes that this schedule of fees is merely an attempt to share the burden resting on the medical and dental professions and does not fully compensate on the basis of all professional schedules. Where volunteer service is not available or compensation is desirable, the fees allowed should not exceed the amounts indicated in the following paragraphs without prior approval of the vice chairman.

If physicians or dentists are needed for either part or full time duty at emergency medical stations, emergency hospitals, concentration centers, for assisting health officials in immunization work or making home visits on a mass basis, they may be employed at not to exceed $10 per day for full time and proportionately smaller amounts for part time duty. If employed on an hourly basis (one to three hours only) the rate should not exceed $2.50 per hour. An additional amount of 5 cents per mile may be allowed if they use their automobiles for transportation.

Arrangements for medical and dental services on an individual patient basis may be authorized following the usual Red Cross disaster case work processes.

If physicians not employed on a part or full time basis are needed for making home visits, attending obstetric cases or other service, particularly in rural territory, arrangements may be made on an individual patient basis. Arrangements may be made for a limited number of calls per patient at the prevailing local fee, but not to exceed $3 per visit, plus 25 cents per mile (one way) for calls in rural areas and not to exceed $20 for attending an obstetric case, including one or two postpartum visits, plus 25 cents per mile (one way) for each call in rural areas. No mileage allowance shall be made for visits within the corporate limits of a city or village where the physician resides.

Glasses may be fitted, dental plates made and laboratory service and x-ray examinations obtained at the prevailing local rate. When a considerable number of x-ray examinations are required, a reasonable reduction is desirable.

One to two dollars per visit may be allowed for a limited number of office visits, and three to five dollars for a physical examination.

A surgical fee should not exceed $50 except in very highly specialized fields such as orthopedic and plastic surgery, or in unusually severe injuries requiring a long period of treatment.

When the illness or injury of a disaster patient is complicated with a preexisting disease such as a venereal disease, allowance may be made for the purchase of medical supplies sufficient for a limited course of treatment to insure his prompt recovery or to make him noninfectious.

Occasionally when a disaster causes a large number of mutilating injuries and the care of disaster patients interferes extensively with the regular practice of physicians, compensation may be on the basis of a lump sum honorarium for all patients regardless of their number or the duration of their illnesses. Any such arrangement must have the prior approval of the vice chairman.

With the approval of the director, the medical officer or his representative will plan and arrange for professional compensation.

Reasonable hospital rates may be paid for the care of patients including ordinary service, medicines, dressings, operating room, etc. (for disaster caused illnesses or injuries), on a case work basis. Ward rates are generally considered reasonable. Commitments should not be made until they have been approved by the director. Verbal agreements between hospitals and the Red Cross will be given written confirmation by the director.

Authorization to physicians to write prescriptions for disaster patients should be granted only on an individual case basis. Druggists should be informed of this policy and instructed to fill prescriptions as a charge against the Red Cross only when each prescription is accompanied by a disbursing order.

Report of the Judicial Council

Dr. George Edward Follansbee, Chairman, presented the report of the Judicial Council, which was referred to the Reference Committee on Amendments to the Constitution and By-Laws.

Report of the Council on Medical Education and Hospitals

Dr. Ray Lyman Wilbur, Chairman of the Council, presented the report of the Council on Medical Education and Hospitals, together with supplementary reports, which was referred to the Reference Committee on Medical Education:

SUPPLEMENTARY REPORT: ESSENTALS OF AN ACCEPTABLE MEDICAL SCHOOL

I. ORGANIZATION

A medical school should be incorporated as a nonprofit institution. Its board of trustees should be composed of public spirited men or women having no financial interest in the operations of the school or its associated hospitals. The trustees should serve for fairly long and overlapping terms. If the choice of trustees is vested in any other body than the board itself, that fact should be clearly stated. Officers and faculty of the school should be appointed by the board.

II. ADMINISTRATION

There should be careful and intelligent supervision of the entire school by the dean or other executive officer who, by training and experience, is fitted to interpret the prevailing standards in medical education and who is clothed with sufficient authority to carry them into effect.

There should be a good system of records showing conveniently and in detail the credentials, attendance, grades and accounts of the students, by means of which an exact knowledge can be obtained regarding each student's work. Records should also be kept showing readily the attendance of students at the teaching hospitals and dispensaries and the maternity and post mortem cases attended.

The school should require that students be in actual attendance within the first week of each annual session and thereafter. Except for good cause, such as for illness, no credit should be given for any course when the attendance has been less than 80 per cent of the full time.

The school should issue, at least annually, a bulletin setting forth the character of the work which it offers. Such announcement should contain a list of the members of the faculty with their respective qualifications. The courses available should be set forth by departments (anatomy, physiology and so on) showing for each course its number, subject, content, character (lecture, recitation, laboratory or clinic), length of time, when, where and by whom given, and the amount of credit allowed. Information should be given regarding entrance requirements and tuition fees. The names of the students enrolled during the current or previous sessions should also be included.

The number of students to whom an adequate medical education can be given by a college is related approximately to the laboratory and hospital facilities available and to the size and qualifications of the teaching staff. A close personal contact

between students and members of the teaching staff results in an efficiency which is not possible in an institution where the number of students is excessive.

Advanced standing may be granted to students for work done in other acceptable medical schools, and in granting advanced standing there should be no discrimination against the school's full course students. Official verification of the student's previous medical work should be obtained by direct correspondence with the school from which he comes, and his preliminary qualifications should also be verified and recorded the same as for freshmen students.

The admission of students to the medical school must be in the hands of a responsible committee or examiner, whose records shall always be open for inspection. Documentary evidence of the student's preliminary education should be obtained and kept on file. When the medical school is an integral part of the university, this work usually devolves on the university examiner. Unless the university examiner and his records are closely accessible, however, some officer at the medical school should obtain and keep on file each student's academic records.

III. FACULTY

The school should have a competent teaching staff, graded and organized by departments. Appointments should be based on thorough training, successful teaching experience, ability in research, and willingness to pursue an academic career. In the clinical departments this does not exclude men who are in the active practice of medicine and surgery. Nominations for faculty positions should originate in the faculty, usually being made by the dean in consultation with the department heads or a committee of the faculty. Reasonable security of tenure must be assured in order that the personnel of the faculty may have adequate stability. In the preclinical sciences the faculty should include at least ten qualified persons of professorial rank,[1] devoting their entire time to teaching and to that research without which they cannot well keep up with the rapid progress of medical science. For each twenty-five students in a class there should be at least one full time assistant in each of the preclinical departments. Salaries should be sufficient to enable members of the faculty to support themselves and their families without the necessity of devoting time and energy to other occupations.

IV. PLANT

The school should own, or enjoy the assured use of, modern fireproof buildings sufficient in size to provide lecture rooms, class laboratories, small laboratories for the members of the teaching staff and advanced students, administrative offices and a medical library. Equipment should be adequate, both for student use and for research. A trained librarian should be employed to supervise the operation and development of the library, which should include the more modern text and reference books with the *Quarterly Cumulative Index Medicus*, the *Index Catalogue of the Library of the Surgeon-General's Office* and serviceable card indexes. The library should receive regularly the leading medical periodicals, the current numbers of which should be readily accessible. These periodicals should be bound without delay.

There should be provision for the collection, preservation and indexing of anatomic, embryologic, pathologic and other specimens. With each pathologic specimen coming from postmortems there should also be kept the record of the postmortem, the clinical history of the patient on whom the necropsy was held, and microscopic slides showing the minute structure of the disease shown in the gross specimen. The museum furnishes an excellent means of correlating the work of the department of pathology with that of the clinical departments.

There should be sufficient dissecting material to enable each student to dissect at least the lateral half of the human cadaver, to provide cross sections and other material for study and demonstration.

For experimental laboratory work, as well as for medical research, a supply of animals is essential. Proper provision is necessary also for the housing and care of such animals. In any use made of animals every precaution should be taken to prevent suffering, and work by students should be carefully supervised.

1. Professorial rank as here used includes professors, associate professors and assistant professors.

Each school should have such useful auxiliary apparatus as stereopticons, reflectoscopes, microprojectors, carefully prepared charts, embryologic or other models, manikins, dummies for use in bandaging, x-ray apparatus, and other aids to effective teaching.

V. CLINICAL FACILITIES

The school may own or control a general hospital. By control is meant the unquestioned right to appoint the attending staff. In this event the students come into close and extended contact with patients under adequate supervision. In the event that a medical school depends for clinical teaching on an independent hospital, it is essential that the clinical teachers, either on nomination by the school or by agreement in conference between school and hospital, be appointed by the hospital trustees to appropriate positions on the hospital staff. Such hospitals should be in close proximity to the school and have a daily average of not less than 200 patients who can be utilized for clinical teaching, these patients to be of such character as to permit the students to see and study the common variety of surgical and medical cases as well as a fair number in each of the so-called specialties. In the use of this material, bedside and ward clinics should be developed for sections of from five to ten students; and patients in medicine, surgery and the specialties should be assigned to each student under a well supervised clinical clerk system. The treatment and care of these patients should be particularly observed and recorded by the student under the strict supervision of the intern, the resident or the attending staff of the hospital. The use of existing municipal or state hospitals for teaching purposes is also advised.

The school should also own or control ample hospital facilities for children's diseases, contagious diseases and nervous and mental diseases.

The school should own or control a well ordered dispensary or outpatient department with a daily average attendance of at least 100 patients (visits). Good histories and records of the patients should be kept and the material used in medical instruction. The attending staff should be drawn largely from the faculty, including those of highest rank.

At least fifteen maternity cases should be provided for each senior student, who should have actual charge of these cases under the supervision of the clinical instructor. A carefully prepared report of each case should be handed in by the student.

Facilities should be provided for at least fifty necropsies during each school session which are attended and participated in by students. These should be performed by the professor of pathology or a member of his staff. The material thus secured should be used in connection with clinical pathologic conferences.

VI. RESOURCES

Experience has shown that modern medicine cannot be acceptably taught by a school which depends solely on the income from students' fees. No medical school, therefore, should expect to secure approval which does not have a substantial income in addition to students' fees. This statement carries double weight if the school finds it necessary to maintain its own teaching hospital.

VII. REQUIREMENTS FOR ADMISSION

1. The minimum requirement for admission to approved medical schools is two years of college training which include English, theoretic and practical courses in physics, biology, and general and inorganic chemistry. Three years or more in college is, however, recommended.

2. Since it cannot in general be assumed that all who have satisfied these requirements merely in terms of hourly credits are fitted for the study of medicine, it is desirable that qualitative standards for admission should be imposed.

3. As a rule candidates should have received their preliminary education in institutions approved by accrediting agencies acceptable to the Council. Exception to this rule may be made in the case of applicants who have demonstrated superior ability. For the convenience of admitting officers the Council has prepared a list of colleges of arts and sciences approved by national and regional educational associations.

4. Admission to approved medical schools may also be by examination under the following conditions:

(*a*) Candidates who have completed two years of collegiate instruction and present evidence of general scholarship of high order, but who lack credits in not more than two of the required subjects, may be admitted on passing examinations in these subjects.

(*b*) Candidates who have completed three years of collegiate instruction and present evidence of having accomplished work of distinction in one or more fields of learning, but who lack credit in any or all of the required subjects, may be admitted on passing examinations in these subjects.

VIII. CURRICULUM

The entire course of four academic years should consist of from 3,600 to 4,400 hours, distributed as from 900 to 1,100 hours a year, and shall be grouped as set forth in the following schedule, each group to be allotted approximately the percentage of hours of the whole number of hours in the courses as stated:

	Number	Per Cent.
1. Anatomy, including embryology and histology	14	18.5
2. Physiology	4½	6
3. Biochemistry	3½	4.5
4. Pathology, bacteriology and immunology	10	13
5. Pharmacology	4	5
6. Hygiene and sanitation	3	4
7. General medicine	20	26.5
Neurology and psychiatry		
Pediatrics		
Dermatology and syphilis		
8. General surgery	13	17.5
Orthopedic surgery		
Urology		
Ophthalmology		
Otolaryngology		
Roentgenology		
9. Obstetrics and gynecology	4	5
Total	76	100
Electives	24	0

When the teaching conditions demand it, a subject may be transferred from one division to another.

Several of the medical schools now require an internship for graduation. Where it is not obligatory it is strongly urged and graduates should be assisted in securing internships in hospitals approved by the Council on Medical Education and Hospitals of the American Medical Association.

Report of the Council on Scientific Assembly

Dr. James E. Paullin, Chairman, presented the report of the Council on Scientific Assembly, which was referred to the Reference Committee on Sections and Section Work.

Dr. Paullin also presented the following proposed amendment to Section 3, Chapter IX, of the By-Laws, which was referred to the Reference Committee on Amendments to the Constitution and By-Laws:

To amend Chapter IX, Sec. 3 of the By-Laws by adding after paragraph six (6) the following:

"And with the cooperation of the section officers to combine section programs and to arrange such other changes as may seem advisable."

So that when so amended said section will read as follows:

"(6) to arrange the programs for the general meetings of the Scientific Assembly and with the cooperation of the section officers to combine section programs and to arrange such other changes as may seem advisable."

NEW BUSINESS

Resolution on Sulfanilamide

Dr. Burt R. Shurly, Section on Laryngology, Otology and Rhinology, presented the following resolution, which was referred to the Reference Committee on Miscellaneous Business:

WHEREAS, Sulfanilamide and its allied products have proved of great usefulness in various streptococcic and other infections of the human body; and

WHEREAS, Its use carries with it toxic symptoms and idiosyncrasies which make it dangerous to human life when the user is not guarded by blood counts and by the supervision of persons with understanding of the drug; and

WHEREAS, the dosage of this remedy is of the greatest importance in obtaining proper results; be it

Resolved, That the medical profession condemn the sale of this drug over the counter and its use by the public, except when prescribed by a physician and taken under his observation.

Resolution Requesting Reconsideration by the Council on Foods of Establishment of Suitable Standards for the Acceptance of Butter

Dr. J. Gurney Taylor, Wisconsin, presented the following resolution, which was referred to the Reference Committee on Hygiene and Public Health:

WHEREAS, The American Medical Association, through its duly elected Board of Trustees, representing the medical profession in each of the several states, in 1929 established a Council on Foods, whose purpose was to create suitable standards for the health claims made in food advertising and to protect the public from unsound, unwarranted, false and fraudulent claims for foods; and

WHEREAS, The Council on Foods of the American Medical Association during these several years has made a valuable contribution in protecting the public from unscientific health claims for foods and has, through its efforts, elevated the standards of advertising for the sale of food products of those commodities that have been granted the seal of acceptance; and

WHEREAS, The public has recognized the value of these efforts and has placed the utmost confidence in the decisions and the work of the American Medical Association through its Council on Foods, which now gives the connotation of a standard of value on those foods which bear the seal of acceptance, and the seal has come to indicate to the public that the medical profession has approved that product and that any product so labeled is a valuable adjunct to the diet of the individual; and

WHEREAS, The seal, once granted to certain butter products, was withdrawn by the Council on Foods without prejudice to such products and without any implication that the nutritional value of dairy products was doubtful, recognizing, on the contrary, that butter and dairy products are valuable components of the daily diet, and thus an unintentional injury may have been done the butter and dairy industry by such withdrawal of the seal of acceptance; therefore be it

Resolved, That the Council of the State Medical Society of Wisconsin, through the regularly elected delegates of the society, call this to the attention of the entire House of Delegates of the American Medical Association at its meeting to be held in San Francisco, June 13 to 17 inclusive, requesting the House of Delegates to request the Council on Foods to reconsider suitable standards for the acceptance of butter and the advertising associated therewith.

Resolution on Traveling Hall of Health

Dr. Howard L. Snyder, Kansas, presented the following resolution, which was referred to the Reference Committee on Hygiene and Public Health:

WHEREAS, The successful handling of halls of health and similar exhibits by various state and county medical societies has seemingly demonstrated a vast amount of public interest in activities of this kind; and

WHEREAS, It is believed that visual lay education depicting the progress of modern medicine, the service it is able to offer and the ways and means in which the public may take advantage of that service affords one of the best means for the medical profession to reply to the charges of its present critics; and

WHEREAS, It is further believed that many public agencies, medical schools, boards of health, medical supply concerns and other institutions allied with the practice of medicine would be willing to cooperate with the American Medical Association in the presentation of extensive, efficient and helpful exhibits of this kind; be it therefore

Resolved, That the Kansas Medical Society does hereby suggest and recommend to the American Medical Association that it establish a traveling Hall of Health, including exhibits of all kinds pertaining to public health and the practice of medicine, for display in all parts of the country under cosponsorship with the constituent state associations.

Approved by the House of Delegates of the Kansas Medical Society in annual session on June 12, 1938.

Resolutions Requesting a Study of American Spas

Dr. Carl F. Vohs, Missouri, presented the following resolutions, which were referred to the Reference Committee on Hygiene and Public Health:

WHEREAS, There are some purported spas in America that make exaggerated claims as to their curative properties and that are not conducted on an ethical basis; and

WHEREAS, There is almost a total absence of reliable information on American spas and health resorts; and

WHEREAS, Many American citizens go to European spas when equal or better results might be obtained at American spas with great saving of time, money and inconvenience; therefore be it

Resolved, That this House of Delegates authorize the President of the American Medical Association to appoint a special committee of five to conduct a study of American spas and health resorts to the end that authentic information regarding spas may be available to physicians; and be it further

Resolved, That our delegates be instructed to present this resolution to the House of Delegates of the American Medical Association at the San Francisco session in June 1938.

Recommendations for Establishment of Council on Medical Care

Dr. George Blumer, Connecticut, presented the following recommendations and letter, which were referred to the Board of Trustees:

At a meeting of the House of Delegates of the Connecticut State Medical Society, held June 1, 1938, the following recommendations of the Committee of Twenty on Medical Care were approved and the delegates to the American Medical Association were instructed to present them to the House of Delegates of the American Medical Association at its meeting in San Francisco:

1. That this society request the House of Delegates of the American Medical Association to establish a council of the Association to be composed of individuals especially qualified to deal with the problems of medical care and to be known as the Council on Medical Care.

2. That this society requests the House of Delegates of the American Medical Association to urge that each state medical association appoint a committee on medical care to cooperate with the Council on Medical Care of the American Medical Association and to suggest that each county medical association appoint a committee on medical care to report to and cooperate with the state committee on medical care.

Dr. Blumer also read the following letter in explanation of the recommendations:

June 3, 1938.

Walter R. Steiner, M.D.
646 Asylum Avenue
Hartford, Connecticut
Dear Doctor Steiner:

Your attention is directed to the following resolution passed by the house of delegates of the Connecticut State Medical Society at its annual meeting June 1.

That the Delegates to the American Medical Association be instructed to urge upon the House of Delegates of the American Medical Association the necessity for special qualifications of the members of the proposed Council on Medical Care, and also to urge that this council include representatives from the Bureau of Legal Medicine and Legislation and the Bureau of Medical Economics, and also, as ex officio members, the chairmen of the Council on Medical Education and Hospitals and the Council on Industrial Health and representatives of the United States Public Health Service and the health sections of the United States Department of the Interior.

Copies of this resolution are being sent also to your alternate.

Very truly yours,

CREIGHTON BARKER, M.D.

Resolutions Requesting Council on Foods to Change Its Policy with Respect to the Consideration and Acceptance of Butter

Dr. Fred Moore, Iowa, presented the following resolutions, which were referred to the Reference Committee on Hygiene and Public Health:

WHEREAS, One of the main objectives of the Council on Foods of the American Medical Association is for improvement in the nature of advertising; and

WHEREAS, The Council on Foods has changed its policy and no longer considers and "accepts" butter and other natural dairy products; and

WHEREAS, Since discontinuing its acceptance of butter it has given its seal of acceptance to substitute products such as oleomargarine sold under trade names; and

WHEREAS, This policy of the Council on Foods has encouraged commercial firms to advertise such products as being accepted by the Council on Foods and used and approved by the medical profession at large; and

WHEREAS, This policy of the Council is bringing much criticism on the profession at large from the dairy interests of the country; and

WHEREAS, The medical profession has always advocated the liberal use of natural dairy products in the interest of public health; and

WHEREAS, The profession at large does not want to be held responsible for a policy which discriminates against the natural dairy products in favor of the margarine class of products; be it

Resolved, By the House of Delegates of the American Medical Association, that the Council on Foods be requested to change its policy in such manner as will eliminate this basis for warranted and undesirable criticism of the medical profession and of the American Medical Association; and be it further

Resolved, That the delegates of the Iowa State Medical Society be instructed to present this action to the House of Delegates of the American Medical Association at the annual meeting in San Francisco in June 1938.

Adopted by the house of delegates of the Iowa State Medical Society May 13, 1938.

Proposed Amendments to the By-Laws

Dr. T. R. K. Gruber presented the following proposed amendments to the By-Laws, on instruction from the executive committee of the council of the Michigan State Medical Society, which were referred to the Reference Committee on Amendments to the Constitution and By-Laws:

Insert in Chapter VI, Section 1, of the By-Laws, "except as otherwise hereafter provided for in the By-Laws" after the sentence "All resolutions or recommendations of the House of Delegates pertaining to the expenditure of money must be approved by the Board of Trustees before the same shall become effective."

Add to Chapter VII, Section 3, of the By-Laws, the following: "(*d*) Committee on Public Relations."

Add to Chapter VIII, Section 1, of the By-Laws, the following:

"The Committee on Public Relations shall consist of five members each selected for a period of five years by the House of Delegates. The term of office of the members shall expire in succession, one each year, and the House of Delegates shall elect annually one member to fill the vacancy except that in 1938 the House of Delegates shall elect one member to serve one year, one to serve two years, one to serve three years, one to serve four years and one to serve five years. The Speaker of the House of Delegates shall be ex officio member of this committee."

Add to Chapter VIII, Section 3, of the By-Laws the following:

"No appropriation for the expenses of any standing committee for any one year shall be in excess of a maximum or less than a minimum of an amount that may be recommended to the Board of Trustees by the House of Delegates."

Add to Chapter IX of the By-Laws the following new section:

"Sec. 4. The Committee on Public Relations shall have authority to act for the American Medical Association in conference with governmental or lay organizations in matters of public interest, subject at all times to the approval of the Board of Trustees. This committee shall have authority to employ expert and talented professional public relations counsel and assistance as it may deem advisable. Any decision by the Board of Trustees or by the Committee on Public Relations may be revoked by a two-thirds majority of the House of Delegates regularly convened."

Resolutions Requesting the Council on Medical Education and Hospitals to Study the Status of Clinical and Pathologic Laboratories and Other Departments in Hospitals

Dr. Francis F. Borzell, Pennsylvania, presented the following resolutions, which were referred to the Council on Medical Education and Hospitals:

WHEREAS, The American Medical Association has through its House of Delegates and its various bureaus and councils from time to time propounded certain principles of ethics and established standards of relationship looking toward the maintenance of the highest quality of professional service both in private practice and in hospitals; and

WHEREAS, Many of these pronouncements refer specifically to those special branches of medicine involving somewhat unusual relationship between hospitals, institutions and the physician practicing these specialties in the hospital; and

WHEREAS, Certain usages have sprung up which are tending to involve ethical and legal considerations; and

WHEREAS, It would appear to be highly desirable and in the best interests of good medical practice and sound public policy to have certain of the aforementioned pronouncements clarified, codified and in some instances reiterated; be it

Resolved, That the Council on Medical Education and Hospitals be requested to study the status of clinical and pathologic laboratories, radiologic departments and physical therapy departments in hospitals and institutions with a view toward standardizing the relationship of these services to these institutions and when necessary reaffirming principles of ethics involved in these relationships; and be it further

Resolved, That the Council be authorized to confer with such agencies as are deemed necessary to arrive at these conclusions.

Resolution on Motion Picture "Birth of a Baby"

Dr. C. W. Roberts, Georgia, presented the following resolution, which was referred to the Reference Committee on Executive Session:

WHEREAS, At the annual session of the Medical Association of Georgia, held in Augusta, April 26-29, 1938, a committee of the association which was appointed to view and censor the movie film "The Birth of a Baby" reported as follows:

"Your Committee, at the request of Dr. Traylor, after witnessing the presentation of 'The Birth of a Baby' at the Imperial Theater on the morning of April 28, 1938, unanimously agreed that the interest of maternal and child welfare would be advanced by the release of the production. Your chairman, however, feels that there should be some restriction as to the age of those admitted to its presentation. Signed, Joseph Akerman, Chairman," and

WHEREAS, In the discussion of this report in the house of delegates, doubt was expressed as to whether the conditions surrounding the production, release and propagandizing of the picture were in consonance with the policies of the House of Delegates of the American Medical Association, and

WHEREAS, The Medical Association of Georgia, having had submitted to it a request to approve the showing of the film in the movie theaters of Georgia, desired, before taking any action, to have the position of the house established, adopted the following resolution:

"That the recommendation of the Committee representing the Medical Association of Georgia be transmitted to our delegates to the American Medical Association for the consideration of the House of Delegates of that body at the San Francisco session, and that we do not give out any comment to the press at this time"; therefore be it

Resolved, That this resolution be referred to the appropriate reference committee of this House for consideration and recommendation bearing on the issues involved.

Resolution on Fee Schedules

Dr. C. W. Roberts, Georgia, presented the following resolution, which was referred to the Reference Committee on Miscellaneous Business:

WHEREAS, state and county medical societies have from time to time, on their own initiative or at the request of others claiming a valid or social interest in the cost of medical services to a particular group, established so-called fee bills on which the contracting persons or groups agree to base charges; and

WHEREAS, Such fee bills often set up without due regard to the equitable interest of the various groups concerned furnish an implement through which exploitation is practiced and abuses encouraged; and

WHEREAS, The necessity for or advisability of such schedules has never been considered by the House; and

WHEREAS, Controversy over the application of such schedules is rife, serving to divert the attention of the contracting persons from the central fact—namely, the quality of medical care—thus reflecting unfavorably on the profession and lending comfort to those critics who charge it with the adoption of trade union methods; and

WHEREAS, It has been the unwritten rule, established by a long line of ethical practitioners both past and present, to adapt charges for medical services to the ability of his patient to pay, untrammeled by fixed community schedules; therefore be it

Resolved, That this device, appearing with increasing frequency, be examined by an appropriate agency of the American Medical Association to the end that the Association may declare itself on certain controversial points, among which are:

(*a*) The advisability of or necessity for fee schedules in the public interest.

(*b*) Their ethical or unethical qualities.

(*c*) Necessity for certain fixed principles to guide constituent units of the Association when and if it is deemed, in the public interest, necessary to adopt such a device, and

(*d*) Whether such schedules, approved by constituent units of the Association, should or should not provide for elasticity so as to permit of adaptation to wage levels, specialized medical services, variations based on differential costs as between urban, semiurban and rural practice and other related considerations.

Resolution on Revision of Principles of Medical Ethics

Dr. Robert A. Peers, California, presented the following resolution, which was referred to the Judicial Council:

WHEREAS, The Principles of Medical Ethics is the foundation of professional conduct for physicians; and

WHEREAS, Changing times alter tendencies toward interpretation of all ethical rules, although the nature of ethics remains unchangeable; and

WHEREAS, A careful study of the Principles of Medical Ethics makes it apparent that there exists a pressing need for clarification, amplification and codification of these tested and time honored rules of conduct; therefore be it

Resolved, That the Speaker of the House of Delegates appoint a Committee of Five to proceed toward the amplification, clarification, codification and revision of the Principles of Medical Ethics, directing the said committee to report to this House at its session in 1939.

Resolutions on Controlled Animal Experimentation

Dr. Elbridge J. Best, California, presented the following resolutions, which were referred to the Reference Committee on Hygiene and Public Health:

WHEREAS, The knowledge possessed by modern medicine and the remedial measures made available for the prevention, diagnosis and treatment of disease in human beings and in live stock and other domestic animals has been made possible only by controlled, humane and scientific animal experimentation, controlled by medical men, research workers and laboratories; and

WHEREAS, Controlled animal experimentation has uncovered the causes of contamination or blighting of many foods (fruits, vegetables and milk) which makes them dangerous for human and animal consumption; and

WHEREAS, Continuous research, study and investigation of causes and prevention of many human diseases, animal infections and causes for food deterioration are dependent on a continuation of controlled animal experimentation in order that human health and lives, as well as live stock and foodstuffs, may be saved and financial losses be prevented; and

WHEREAS, There are many poorly informed persons now active in an endeavor to enact legislation that would cripple legitimately and humanely controlled animal experimentation so vitally necessary to those scientific men who are seeking the etiology and prevention of conditions that still cause human suffering, that kill fowl, other bird life and animals and that affect the raising of foodstuffs; and

WHEREAS, These persons, commonly known as antivivisectionists, wilfully repudiate, ignore and misrepresent the proved facts that have been established by scientific research and study and in their endeavor to secure the enactment of laws prohibiting animal experimentation, which laws and prohibition would cause much human suffering, loss of lives, destruction of animals and foodstuffs and also terminate the studies of scientists and laboratory research workers, persist in their efforts to mislead people; therefore be it

Resolved, That: 1. Controlled animal experimentation is of supreme importance in the study and investigations seeking the cause and cure of factors and conditions that affect the health and cause the death of human beings, animals, fowls, dogs, birds and live stock; and

2. Any and all efforts to restrict or prohibit controlled animal experimentation will cause untold suffering, loss of lives of human beings, animals and live stock and produce an uncalculable financial loss to every community, industry and the commonwealth; and be it further

Resolved, That the American Medical Association condemns the efforts of all who endeavor to cripple scientific research by seeking to obtain the enactment of laws hampering or prohibiting the use of animals in research investigation; and further be it

Resolved, That the House of Delegates recommends that each unit of this Association be urged immediately to undertake the education of the lay public on the need and value of controlled animal experimentation and to expose the unjustifiable and unsupportable claims and allegations of those who seek to obtain laws that may hamper or prohibit the humane use of animals in research studies.

Resolution on Recognition of Acting Assistant Surgeons of the Spanish American War

Dr. Elbridge J. Best, California, presented the following resolution, which was referred to the Reference Committee on Legislation and Public Relations:

The House of Delegates of the American Medical Association, now in annual session, reaffirms the statements and convictions as transmitted by the Board of Trustees of the American Medical Association to the House of Delegates at the annual session in Cleveland in 1934, relative to the discrimination and neglect meted out to those men who served as acting assistant surgeons during the Spanish American War, Philippine Insurrection and Boxer Uprising.

WHEREAS, This situation has in no wise been remedied, notwithstanding the efforts and requests of a certain number of these men to bring this neglect to the attention of Congress; and

WHEREAS, Trained nurses who served on contract during this conflict have been declared to have been an integral part of the army and have thus been pensionable since 1922, and all medical officers who served during the World War have a pensionable status; and

WHEREAS, Three fourths of the members of the Yellow Fever Board which rendered a service outstanding in the history of mankind were acting assistant surgeons, one of whom lost his life in the performance of this duty; therefore be it

Resolved, That every officer and agency of our organization, including the legislative committees of our constitutent state societies, be empowered and urged to request their respective members of Congress, in justice to themselves and in fairness to this group, to right the wrong and discrimination which has been visited on a body of loyal men who volunteered in an emergency of their government while at war;

Therefore, it is the unanimous sentiment of this body that Congress be requested to give that recognition which has so long been withheld from this group.

Resolution on Hospital Insurance

Dr. Charles H. Goodrich, New York, on behalf of the Medical Society of the State of New York, presented the following resolution, which was referred to the Council on Medical Education and Hospitals:

WHEREAS, The Medical Society of the State of New York on May 9, 1938, adopted revised principles on all matters pertaining to hospital insurance; and

WHEREAS, These principles are known as the restatement of Proposition No. 3 of the Booth Committee Report of 1933 and in substance are as follows:

Preamble: There is in every community a group of people below the "comfort level," on whom the costs of medical care impose a heavy burden. These are self-respecting people of the salaried class in most instances, whose living expenses are met from their weekly earnings. For them the greater part of medical costs comprise charges for hospital and nursing care.

Revision, 1937:

(*a*) Hospital care shall mean provision of bed, board, general nurse service, customary surgical dressings and medicines, and other facilities of the institution not including medical care as defined in *b*.

(*b*) Medical care shall mean: any procedure or service by a licensed physician acting under authority of section 1250 of article 48 of the Education Law of the State of New York.

(*c*) Hospitals making contracts with organizations, acting under chapter 595 of the laws of 1934—the Insurance Law of the State of New York—shall not implicate themselves with conditions inconsistent with the principles and definitions herewith stated.

(*d*) The operation of such hospital insurance in any community shall not discriminate against any reputable institution, whether voluntary or proprietary.

(*e*) Admission of patients for care under the benefits of such hospital insurance shall be only through reference by a private physician. Exemption to this provision shall be made for the exigency of any emergent need.

(*f*) Certificates of membership in such association shall specifically state that the insurance does not provide for any medical care as defined in *b*. Actual wording of the certificate to be approved by the local county medical society or societies.

(*g*) Every hospital insurance plan operating under the egis of this proposition shall develop the details of its operation to conform with such principles and policies as from time to time may be determined by the local county medical society or societies.

(*h*) When it is so desired by the local county medical society satisfactory representation from the membership of the local county medical society on the board of management of the hospital insurance shall be arranged; and

WHEREAS, On May 9, 1938, the Medical Society of the State of New York directed its delegates to urge adoption of these principles by the House of Delegates of the American Medical Association; therefore be it

Resolved, That the House of Delegates of the American Medical Association hereby approve the principles above stated and that the Council on Medical Education and Hospitals be instructed to refuse or withdraw approval of hospitals that do not comport themselves in accordance with these principles.

Resolutions Requiring of Foreign Graduates Full Citizenship in the United States

Dr. William R. Molony Sr., California, presented the following resolutions, which were referred to the Reference Committee on Medical Education:

WHEREAS, The license to practice medicine and surgery in many countries is limited strictly to citizens of these countries; and

WHEREAS, In addition to holding full citizenship, each applicant is required in several of these countries to show that his medical education was pursued and completed in said countries; and

WHEREAS, Many foreign graduates in medicine and surgery in increasing numbers are seeking admittance to the practice of medicine in these United States; and

WHEREAS, In order to convey adequately to these applicants a full and satisfactory knowledge of the American conception of patriotism and of ethical ideals in medicine, it is necessary that a period of residence be required; therefore be it

Resolved, That in addition to the requirements for foreign graduates, as outlined in a resolution adopted by the House of Delegates for the American Medical Association in 1936, it is highly desirable that an additional requirement of full citizenship in the United States of America be demanded; and be it further

Resolved, That the House of Delegates of the American Medical Association approve the foregoing and that a copy be sent to the properly constituted officers of each examining board of the United States and to the Federation of State Medical Boards, with the request that they consider seriously urgent need for the adoption of such rules and/or legislation necessary to put the purposes of these resolutions into effect.

Resolution on Rockefeller Cancer Control Fund

Dr. Henry C. Macatee, District of Columbia, presented the following resolution, which was referred to the Reference Committee on Miscellaneous Business:

WHEREAS, Mr. Willard D. Rockefeller of New York City proposes to establish the "Rockefeller Cancer Control Fund" as a memorial to his mother; and

WHEREAS, Mr. Rockefeller has agreed to assume all responsibility for the establishment of the fund and for making it perpetual by creating an organization for that purpose; and

WHEREAS, The proposed fund is designed to meet the practical needs for the control and treatment of cancer, as distinguished from other foundations to provide for research in cancer; and

WHEREAS, It is proposed that the resources of the fund shall be dispensed through an Advisory Council to be composed mainly of outstanding physicians, and that, in order to provide for the application of funds so dispensed more directly to the needs of the current clinical problems of cancer, funds so dispensed shall be expended through organized, ethical medical channels, by allocation of such funds along three general lines, viz:

First: To provide remuneration to ethical physicians for treatment and care of indigent cancer patients and for specified clinical work.

Second: To furnish equipment and materials to specified clinics and hospitals for cancer work.

Third: For educational purposes; and

WHEREAS, Dr. Edith Se Ville Coale of Washington, D. C., as the friend and physician of Mr. Rockefeller's mother for many years, has been requested by him to serve as trustee of the proposed fund; and

WHEREAS, Dr. Coale, desiring first the approval of the medical society of which she is a member, presented the proposal to the executive committee of the Medical Society of the District of Columbia, which committee, constitutionally acting for the society now in recess, approved the proposed project in principle and directed the delegate of the society to present the plan as herein described for the approval of the House of Delegates of the American Medical Association; now, therefore, be it

Resolved, That the House of Delegates of the American Medical Association, in convention assembled at San Francisco in 1938, approves in principle the creation of the Rockefeller Cancer Control Fund for the purposes indicated by Dr. Edith Se Ville Coale, Trustee.

Resolutions on Program of Public Relations

Dr. Lyell C. Kinney, California, presented the following resolutions, which were referred to the Reference Committee on Legislation and Public Relations:

WHEREAS, The American Medical Association has attempted for many years to appraise and meet the changing problems in the provision and distribution of medical care; and

WHEREAS, The American Medical Association has constantly endeavored to raise the standards of medical practice and has maintained a fixed policy that any necessary changes in medical practice must improve and not sacrifice the quality of medical care; and

WHEREAS, It is the policy of the American Medical Association to endeavor to provide adequate medical care to all the people in this country, and to that end the American Medical Association has offered its facilities and its cooperation to any authorized representative of the government to promote orderly progress and greater efficiency in the provision of medical care; and

WHEREAS, There is a constant and determined attack on the American Medical Association in lay magazines in an effort to discredit the policies of the American Medical Association with the public and the government, to misrepresent the work and ideals of the Association and to mold public opinion against the Association; therefore, be it

Resolved, That the House of Delegates of the American Medical Association direct the Board of Trustees to develop an aggressive and forceful program of public relations in the Bureau of Health Instruction to inform the public and governmental agencies concerning the policy of the American Medical Association with regard to changes in medical practice, and the reasons therefor; and be it further

Resolved, That it is the judgment and the request of the House of Delegates that the Bureau of Health Instruction employ outstanding professional public relations counsel to direct a sustained program for the purpose of presenting to the public the true facts concerning the need for medical care and the position of the medical profession concerning the problems involved.

Resolution on Standards for the Practice of Medicine in Hospitals

Dr. E. H. Skinner, Section on Radiology, presented the following resolution, which was referred to the Council on Medical Education and Hospitals:

WHEREAS, The Board of Trustees of the American Medical Association, in its annual report, has directed attention to certain conditions in these words, "The present situation in the practice of anesthesia, pathology and radiology in hospitals and the potentiality of increasing the number and variety of special medical services controlled by hospitals call for the establishment of a similar ideal standard designed to permit a constant improvement of practice in hospitals"; and

WHEREAS, The said Board in its report has further pointed out that the turmoil between hospitals and national societies of anesthetists, of pathologists and of radiologists cannot continue without harmful effects on the practice of medicine in hospitals; be it

Resolved, That this House of Delegates instruct its Board of Trustees to direct the Council on Medical Education and Hospitals to proceed toward the creation of standards for the practice of medicine in hospitals, such standards to include the requirements for approval of hospitals and the standards which govern the relations between physicians and hospitals.

The meeting recessed at 1:10 p. m. to reconvene Tuesday morning, June 14, at 9:30 a. m.

Second Meeting—Tuesday Morning, June 14

The House of Delegates was called to order at 9:30 a. m. by the Speaker, Dr. Nathan B. Van Etten.

Roll Call

It was moved by Dr. Arthur C. Morgan, Pennsylvania, seconded by Dr. J. Newton Hunsberger, Pennsylvania, and carried, that the House dispense with the roll call.

Presentation of Minutes

On motion of Dr. J. Newton Hunsberger, Pennsylvania, seconded by Dr. John Z. Brown Sr., Utah, and carried, the House dispensed with the reading of the minutes.

Report of Reference Committee on Credentials

Dr. Deering G. Smith, Chairman, reported that 164 delegates had registered before the close of the meeting of the House on Monday, June 13, and that four delegates had registered since that time, making a total registration of 168. The Speaker declared that this would constitute the roll of the House.

Report of Judicial Council

Dr. George Edward Follansbee, Chairman, presented the following report of the Judicial Council acting as a reference committee, which was adopted on motion of Dr. Arthur J. Bedell, Section on Ophthalmology, seconded by Dr. J. Newton Hunsberger, Pennsylvania, and carried:

The resolution introduced by Dr. Robert A. Peers, California, provides for a rewriting of the Principles of Medical Ethics by a committee of five appointed by the Speaker of the House.

The Principles of Medical Ethics was originally written in 1903 and revised in 1912 by a notable committee consisting of Drs. Frank Billings, Illinois; James E. Moore, Minnesota; A. B. Cooke, Tennessee; Alexander Lambert, New York, and Hubert Work, Colorado. The text today remains the same as the revision made in 1912 with the exception of such amendments as changing times and practices have demanded to meet new conditions. The principles underlying and expressed in the original text have not changed, and amendments that have been made have merely emphasized and clarified the principles with respect to new developments in medical practice. An attempt to rewrite the Principles of Medical Ethics was made at a later date but was abandoned because of failure to produce a more satisfactory text.

The ethics of medicine is stated as it should be in principles of conduct instead of rules. To define and interpret these principles so as to cover every relation of the medical man would be to set up an endless system of rules, regulations and laws approaching in character a criminal code, with its invitation to violation by sophisticated reasoning or through technicality. A rule, regulation or law may be circumvented, but the principle underlying the law cannot be avoided by such means. As occasion arises, amendments will doubtless be made in the future as they have in the past, but these are strenuous times of rapid and radical change and no one can predict the immediate or remote future. The Judicial Council, as your reference committee, recommends that "amplification, clarification, codification and revision of the Principles of Medical Ethics" be postponed.

Respectfully submitted.

GEORGE EDWARD FOLLANSBEE, Chairman.
JOHN H. O'SHEA.
EDWARD R. CUNNIFFE.
WALTER F. DONALDSON.
JOHN W. BURNS.

Report of Reference Committee on Reports of Board of Trustees and Secretary

Dr. Frederic E. Sondern, Chairman, presented the following report, which was adopted by sections and as a whole on motions duly seconded and carried after discussion:

REPORT OF SECRETARY

1. The Secretary reports a gratifying increase in membership of close to 4,000 and in Fellowship of over 2,000, both better records than in the preceding several years, which deserves your commendation.

He directs attention to the steady growth of better organization and field work resulting in helpful contacts with civic and official organizations and the benefits which accrue therefrom. He emphasizes the need for increased interest in scientific work, particularly in the county societies, and suggests that it can be had if the program committees concerned will give greater attention to subjects which tend to awaken and hold the general interest of the membership. In the opinion of your committee this is often due to the practice of leaving the construction of the programs to committees named for this purpose. When the current president concerns himself personally with this matter in the interest of an outstanding administration the results are usually gratifying. Your committee wishes to emphasize that the American Medical Association essentially depends for its strength on the activity of all its constituent state and component county units, and it is therefore incumbent on the state councils to stimulate each and every one of the component county societies to hold regular meetings at which the members should be given the opportunity to renew interest in the scientific and organizational aspects of medicine. Unfortunately there appears to be a deplorably large number of these units that are stagnant, and this condition must be corrected if the Association is to function effectively to your satisfaction.

Your committee asks you to note that the report of the Secretary mentions nothing of the correspondence, using this term in the broad sense, which must result from a membership of close to 110,000 doctors. These countless inquiries, demands, suggestions and complaints, every one of us knows, meet with that invariably prompt, courteous and explicit response which has made our Secretary so universally admired. We hold this genial, efficient and loyal officer in affectionate esteem, and your committee wholeheartedly endorses his recommendations.

2. The report of the Secretary contains reference to amendments to the Constitution proposed by the Judicial Council, which have had the approval of the Reference Committee on Amendments to the Constitution and By-Laws of the 1937 session of the House.

As these amendments require to be put in proper form for proposed inclusion in the Constitution, they have been referred by the Speaker to the Committee on Amendments to the Constitution and By-Laws for this purpose.

REPORT OF BOARD OF TRUSTEES

3. Resolutions on the Death of Dr. George H. Simmons: The report opens with resolutions on the death of Dr. George H. Simmons, as follows:

WHEREAS, Dr. George H. Simmons rendered distinguished service to the medical profession and to the American Medical Association from 1899, when he became Secretary and Editor, through 1924, when he retired holding the positions of Editor and General Manager; and

WHEREAS, During this period of twenty-five years, his wise leadership, his courage, his progressiveness and his initiative advanced the interests and the status of the Association to heights never before reached by any medical organization; and

WHEREAS, His work for the American Medical Association was characterized by intelligence, unselfishness, honesty and righteousness, and his interest endured to the very end of his days; and

WHEREAS, The Board of Trustees, through its intimate contact with Dr. George H. Simmons in all of these works, is cognizant of the extent to which he gave of himself freely for the good of all; therefore be it

Resolved, That this Board of Trustees spread on its minutes its recognition of his accomplishment, and that it tender to his relatives a suitable copy of these resolutions and its sincere sympathy in their sorrow at his passing.

In addition, your Committee desires to call your attention to the fearless courage of this man's convictions in the interest of creating what has proved to be the outstanding weekly medical publication in the world, in which effort he was often in bitter opposition to prominent medical men, who in consequence were eager to depose him in those early days of his remarkable aims. It was his unflinching adherence, without exception, to the unusually high standard he established which gained him the respect and admiration of the membership and established his work as one of the foundation stones for the glory of our Association. His astute vigilance in the interest of American medical men in the late war is another achievement which deserves your admiration. Your committee also desires to record its regard and sympathy.

4. The report of the Board of Trustees covers more than 130 pages of the Handbook, with many additional actions which have been presented since its publication. Aside from this record of the work of the Board it includes the activities of the various councils, bureaus and departments. All of these show a notable expansion of activities over former years in furthering the best interests of our Association for the ultimate benefit of the public. It is difficult for the reference committees concerned to do full justice to the record of such an extensive collection of endeavors in the short period which elapses between their first meeting and the term set for these reports. Every member of this House should read the original reports in detail in order to be acquainted with the nature and scope of these activities. They are not the expressions of one man or of a selfish clique, but they represent the labor of a relatively large number elected or appointed by you on the basis of their special fitness to investigate and confer and then to express for you the opinions and edicts of organized medicine, subject to your review. Your Board of Trustees is painstaking in its efforts to carry out your instructions in these various fields of endeavor, and its unusually uniform competence should command your respect and your loyalty.

It is further the duty of the members of this House, in the opinion of your committee, to carry away to constituent state and component county organizations at least a summary of the Trustees' report, so that individuals and groups can more understandingly express themselves on the current opinion of organized medicine. In recent time there has been an increasing interest of the public in physicians and their ways and in public health, stimulated by all manner of publicity in newspapers

and in weekly and monthly magazines, some of which is contrary to the best interests of the public. Almost every doctor is questioned by patients and friends on these matters, and his more detailed knowledge of the conclusions of organized medicine tends to safeguard the well-being of the American people.

5. General Work and Business Operations: The gross earnings for 1937, amounting to more than $1,650,000, with operating expenses under $983,000, both in advance of the previous year, give you an idea of the magnitude of the operations of your Association. The net income of over $122,000, of which over $83,000 represents income from investments and over $38,000 net operating income, reflects the conservative management.

The details concerning the completion of the Association building and the invitation to all members to visit it are noteworthy. The number of employees, 616, compared with 565 last year and 550 the year before, is further evidence of the increasing activity of the Association, all of which has the approval and commendation of your committee.

6. THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION: That this weekly medical journal is absolutely the leader in its field is generally acknowledged the world over. It is found not only in all medical libraries overseas and in the more representative hospitals as well but also in the offices of the more prominent physicians in all foreign countries. The maintenance of its high standards as well as its progress in new fields as detailed are the result of its outstanding editorial management, headed by the dynamic editor, all of which your committee desires to commend highly. The incorporation into THE JOURNAL of the former BULLETIN, giving all members the benefit of the more intimate Association news, is particularly valuable at this time of public interest in medical affairs, and your committee desires to voice approval.

Special Journals: The high standards of these publications are also generally recognized. While increased circulation and reduction in cost over outlay continue, the Board of Trustees cautions that there is a limit to the continued absorption of this expense beyond which it considers it unwise to go. While your committee is in complete accord with the Board in the matter of conserving resources in these days of financial uncertainties, it must also be had in mind that the effectiveness and prestige of the Association are in large measure judged by the publications it issues. Our record of continued expansion and faultless production is the envy of national associations elsewhere in the world and the source of much deserved pride. In the opinion of your committee every reasonable effort should be made to continue all the publications, and, if the Board really becomes concerned about the expense burden, thought might be given to the possibility of curtailing some other activities actually less important in maintaining the scientific status of the Association.

Library and QUARTERLY CUMULATIVE INDEX MEDICUS: Your committee wishes cordially to endorse the words of the Board, as follows: "The QUARTERLY CUMULATIVE INDEX MEDICUS, recognized as one of the greatest contributions of the Association to the advancement of medical science, had wider circulation in 1937 than in the previous year, but the cost of publication exceeded income received from subscriptions by the sum of $42,616.32, slightly more than in 1936 but less than in 1934 and 1935. This publication represents an essential activity of the Association and deserves far more liberal support than it now receives." The value of this publication and its credit to the Association as an outstanding achievement fully justify its cost in the opinion of your committee. Its importance to all scientists the world over might easily interest one of several foundations to donate funds for support, and your committee would suggest the application for a grant to aid at least in the expenses of production and possibly to allow an expansion to include the entire field of medical literature.

The various branches of the library service as detailed in the report are definitely a great aid particularly to those without nearby libraries, and here also the labor and expense involved seem to your committee to be fully justified.

Standard Classified Nomenclature of Disease: The taking over of this notable work by the Association, which will do so much to standardize nomenclature in medical literature, is a commendable step that has the approval of your committee.

HYGEIA: This publication continues to serve the purposes for which it was founded and its increasing success is indicated by the constant gain in circulation. It is an achievement despite the excess of cost over income and the editor deserves congratulation on what he has been able to accomplish in this difficult field.

7. Cooperative Medical Advertising Bureau: Your committee notes with pleasure the service of this endeavor by the participation of thirty-three of the constituent state medical associations. It assures the progress of honest advertising and has the commendation of your committee with the recommendation that efforts should be made to secure the participation of the other state society publications. We learn with regret the loss of Mr. E. W. Mattson as director, the man whose energies had so much to do with the growing success.

8. Motion Picture on Syphilis: This film, produced by the Association in conjunction with the United States Public Health Service, has been a prominent factor in the recent state and national efforts in venereal disease control and represents just another commendable effort of our Association in the interest of public health.

9. Retirement Fund: The establishment of this fund and the plans for its annual enhancement are quite in keeping with modern practice and have the full endorsement of your committee.

10. Medical Patents: The plan of the Board to evolve a method for standardization and coordination in the matter of medical patents has the endorsement of your committee, which joins in the hope that a suitable practice in control may be established. The recommendation to compile a complete list of the holders of such patents and the intention to ask them to attend a national conference to achieve these ends are also commended by your committee.

11. Proposed Change in Name of Bureau of Health and Public Instruction: The recommendation to change the name of this bureau to Bureau of Health Education has the endorsement of your committee, which suggests that the matter be referred to the Committee on Amendments to the Constitution and By-Laws for suitable action.

12. The Division of Drugs, Foods and Physical Therapy: The creation of this division by the Board, composed of the Council on Pharmacy and Chemistry, the Council on Foods and the Council on Physical Therapy, has made it possible to effect closer correlation of the work of these three councils and to enhance administrative efficiency, which action has the endorsement of your committee.

Council on Pharmacy and Chemistry: The important work of this council in the interest of approved therapeutic substances again shows an almost burdensome increase, and the record of its labors has the admiration of your committee. Its publications are both extensive and noteworthy and deserve the full support which they enjoy. These efforts to establish rationalism in therapeutics are most commendable, particularly those concerning vitamins and the endocrine principles.

Council on Physical Therapy: The continued activity of this council in the evaluation and standardization of physical aids in the healing art is praiseworthy and its continued educational program deserves every encouragement.

Council on Foods: It is evident that the efforts of this council to promote truthful advertising of wholesome foods and the necessarily associated labors are a constantly increasing task requiring a large amount of time. In consequence of the stress of this work it was found necessary to conserve the facilities of the Council by accepting only products that seem to require the safeguarding of the public. The need for the setting up of an exempted list should be realized and its object understood. The Council can well exempt products that enjoy competent government control and those of such nature that safeguarding is not necessary.

The Chemical Laboratory: The investigations of the laboratory continue to be of the greatest assistance to the councils requiring this service. Its efficiency and prompt emergency service were strikingly demonstrated in the recent cases of diethylene glycol poisoning. This prompt and thorough service was possible only by a complete organization and a previously established

list of consultants for specific purposes. Your committee desires to express its admiration.

Council on Industrial Health: Your committee commends the manner of formation of this recently established council and records the summary of the Board's report as follows: "The Council on Industrial Health, organized in December 1937, has held two official meetings and has developed a working organization through the appointment of a secretary and the creation of official committees. Articles dealing with various subjects of major importance in the field of industrial medicine are in course of preparation for publication. The Council has adopted official rules and is proceeding as rapidly as possible, with due conservatism, toward the prosecution of plans that have been officially adopted."

13. Bureau of Legal Medicine and Legislation: This report has been referred to the Reference Committee on Legislation and Public Relations.

14. Bureau of Medical Economics: This report also has been referred to the Reference Committee on Legislation and Public Relations.

15. Bureau of Health and Public Instruction: The commendable activity of the Bureau is another function of the Association showing evidences of expansion and ever increasing activity. The dramatized radio programs as a means of public health instruction are a distinctive success, fully satisfying the modern sophisticated audiences, and they have almost completely replaced in popularity the ordinary radio talks, even those by prominent members of the profession. The cooperation of the National Broadcasting Company should be appreciated, and its aid in suggesting the publication and distribution to the schools of a workbook on programs intended for high schools written by Drs. Bauer and Teschner of the Bureau is also noteworthy. The protection of research by the opposition to proposed laws restricting animal experimentation has had the careful attention of the Bureau. The outlook at the moment is serious in Massachusetts and the District of Columbia, particularly on account of the restricting legislation in California. Experiences in New York have demonstrated the desirability of inviting the legislators themselves to visit university and research laboratories in order to learn the truth concerning the experimental use of animals in medical progress. The family physician has been found a most potent aid in convincing the public of the need of animal experimentation in the advance of knowledge not only in human but in animal disease as well. The annual distribution by the Bureau of the pamphlets by Cannon and Drinker and John Dewey to graduating medical students is most desirable.

The cooperation of the Bureau in general and its director in particular with lay organizations has been singularly successful in the methods of public health instruction.

16. Bureau of Investigation: This bureau has continued to function in its well known way, and the receipt and answering of from ten to twelve thousand communications a year indicate how extensive its activities are. Its problems are many and often complex, requiring most astute handling to avoid recriminations.

17. Bureau of Exhibits: The continually increasing scope of the Scientific Exhibit is shown by the presentation of 254 exhibits at the 1937 session of the Association, again a record number. The constant further perfection of the quality of these exhibits has given them a most enviable international reputation. They truly represent one of the noteworthy educational achievements of the Association, of which we may be justly proud. The exhibits dealing with the activities of the Association are likewise outstanding in quality and interest. The fact that they were sent to thirty-three states on 115 separate occasions indicates their educational service, which your committee desires to emphasize and commend.

18. Report of Committee to Study Contraceptive Practices and Related Problems: This report has been referred to the Reference Committee on Executive Session.

19. Report of Committee to Study Air Conditioning: This report on a most important subject should be studied by every physician coming in contact with this problem as demanded by the statement that opportunities for injury to persons subjected to artificial climates do exist. The report represents a very large amount of study and investigation and deserves the gratitude of the Association to those who undertook it. It is evident not only that a problem exists but that its full solution has not yet been found. Your committee would recommend extending to these investigators our appreciative thanks for their able and extensive labor, with the request that they continue this important service in any way they consider of additional value in the interest of public health.

20. Report of Committee to Determine the Value of X-Ray Film with Paper Base as a Substitute for Film with Gelatin Base: This most interesting and instructive report, which deserves your close study, consists of a majority report by three members of the committee and two minority reports by one member each. It represents a large amount of work which deserves your full appreciation. Your committee desires to record its admiration of such educational tasks done gratuitously for the membership of the Association.

21. Report of the Committee on Scientific Research and Report of the Committee on Therapeutic Research: Your committee is in full accord with these many deserved grants made to encourage research. It believes fully in the support of these doubtless qualified individuals, though it is a less usual aid than collective endowment. A survey will demonstrate that the most important discoveries have been the result of individual rather than collective effort, and this is the basis for the commendation of your committee.

22. Request from the American Red Cross for Approval of Its Medical Policies in Disaster: Your committee has considered the request of the American Red Cross for the approval of medical policies in disaster. Dr. William de Kleine, medical adviser of the American Red Cross, and Dr. Herman Baker, president of the Indiana State Medical Association, appeared before your committee. Your committee desires to recommend that you agree with the statement that the primary responsibility for the care of the sick and injured in disaster rests with the local physicians and dentists. The function of the American Red Cross should be that of cooperation with local physicians and dentists by assisting in organizing and directing medical relief work and by providing the needed facilities that are lacking for the emergency.

In general your committee recommends approval of the principles and practices outlined for the handling of medical features of disaster relief, and endorsement of the hope that physicians and dentists, like other community leaders engaged in various phases of disaster relief work, will give their services on a volunteer basis for patients unable to pay. With regard to detailed arrangements for emergency work when volunteer service is not available, your committee feels that a single plan to be operated all over this large country would be impracticable and unwise. However, detailed arrangements for possible emergency could be made by mutual agreement between the American Red Cross and local medical organizations so that a standard might be set in advance.

Respectfully submitted.

FREDERIC E. SONDERN, Chairman.
CLYDE L. CUMMER.
JOHN H. FITZGIBBON.
FRED W. RANKIN.
FELIX J. UNDERWOOD.

Report of the Board of Trustees

On motion of Dr. A. T. McCormack, Kentucky, seconded by Dr. Arthur J. Bedell, Section on Ophthalmology, and carried, the following report of the Board of Trustees acting as a reference committee, which was presented by Dr. Arthur W. Booth, Chairman, was adopted:

Concerning the recommendations from the house of delegates of the Connecticut State Medical Society that the House of Delegates of the American Medical Association establish a council composed of individuals especially qualified to deal with the problems of medical care, to be known as the Council on Medical Care, and urge each state medical association to appoint a committee on medical care to cooperate with the Council on Medical Care of the American Medical Association and suggest that each county medical society also appoint a committee on

medical care, the Board of Trustees has to report that these recommendations are part of the plan which was originated some months ago, as announced in THE JOURNAL, and which is now in process of becoming effective. The designation of this committee as a Committee on Medical Care will be useful in causing the public to realize that the American Medical Association is concerning itself seriously with this problem.

Telegram from Dr. E. H. Cary, Texas

Dr. Holman Taylor, Texas, reported that he was in receipt of the following telegram from Dr. E. H. Cary, Texas, which the Speaker stated would be spread on the minutes:

Fortunately, with two good kidneys and a first-class heart at 66 and excellent medical care, I am about to conquer the worst fight of my life. Please express in terms of affection as you can so well do the feeling I have for the members and their love and affection which have become a part of me. This untimely illness denied me my greatest annual pleasure, for in the House of Delegates I meet the men who know more about the possibilities of medicine and who, if given a reasonable length of time, will come nearer making a diagnosis of human welfare than any other group.

Messages of Congratulation

On motion of Dr. Carl F. Vohs, Missouri, seconded by Dr. Arthur J. Bedell, Section on Ophthalmology, and carried, the Secretary was requested to send telegrams of congratulations to Drs. E. H. Cary, Texas, and Howard Morrow, Chairman of the Local Committee on Arrangements, on the improvement of their health.

It was requested by Dr. J. Newton Hunsberger, Pennsylvania, that the motion be amended to include the name of Dr. Donald Guthrie, Pennsylvania. The amendment was accepted and the motion was carried.

Report of Reference Committee on Medical Education

Dr. William D. Johnson, Chairman, presented the following report:

1. Resolutions on Medical Practice in Hospitals: The resolutions introduced by Dr. E. H. Skinner, Section on Radiology, Dr. Francis F. Borzell, Pennsylvania, and Dr. Charles H. Goodrich, New York, were taken up and given consideration by the Council on Medical Education and Hospitals acting as a reference committee and will be reported on by that body.

2. Resolutions Requiring of Foreign Graduates Full Citizenship in the United States: The resolutions introduced by Dr. William R. Molony Sr., which in essence express the desirability that foreigners, graduates of foreign institutions, be required to obtain full citizenship in the United States of America before being admitted to practice, meet the full approval of your committee.

3. Report of Council on Medical Education and Hospitals: Your committee has given due and proper consideration to the report of the Council on Medical Education and Hospitals and finds itself in accord with the several recommendations of the Council.

Your reference committee particularly wishes to commend the survey of medical education made by the Council and believes that this study should be so published as to constitute a permanent record of the Association's contribution to this field of professional education. If further funds are required for the final consummation of this project, the committee recommends that proper appropriations be made for this purpose.

Your committee wishes to endorse the report of the Council on Medical Education and Hospitals as a whole, including Supplement A stating the essentials of an acceptable medical school.

Respectfully submitted.

WILLIAM D. JOHNSON, Chairman.
JOHN W. AMESSE.
J. C. FLIPPIN.
MCLAIN ROGERS.
WALTER E. VEST.

On motions, duly seconded and carried, the report of the Reference Committee on Medical Education was adopted section by section and as a whole.

Report of Council on Medical Education and Hospitals

Dr. W. D. Cutter, Secretary of the Council, presented the following report of the Council on Medical Education and Hospitals acting as a reference committee:

The resolutions of Dr. Francis F. Borzell, Pennsylvania, Dr. Charles H. Goodrich, New York, and Dr. E. H. Skinner, Section on Radiology, which were referred to the Council on Medical Education and Hospitals, all dealing more or less with the same subject, were considered together. The proposers of these resolutions, the delegates from the Massachusetts Medical Society, members of the California Medical Association and others met with the Council to express their views concerning the problems that concern the practice of medicine in hospitals by radiologists, pathologists and anesthetists. These problems have been rendered more acute by the rapid extension of systems of group hospital insurance within the last few years. The Council believes that these problems are of vital concern to the medical profession; that unwise decisions at this time may lead to consequences that would be disastrous to physicians and to the public alike, and that, therefore, a serious study should be made of existing relationships between hospitals and the physicians practicing therein, especially in the departments of anesthesia, radiology, pathology and physical therapy, with a view to standardizing the relationship of these services to the hospital and, where necessary, of reaffirming the principles of ethics involved.

The Council recommends that it, jointly with the Bureau of Medical Economics, be authorized to undertake these studies and to confer with other interested agencies, in order that it may be in a position to establish ethical standards for the practice of medicine by physicians holding positions in hospitals and to prevent the exploitation of either the public or the profession. If during this study it is revealed that hospitals registered and approved by the Council are exploiting the public or the profession, such approval may be revoked.

Respectfully submitted.

RAY LYMAN WILBUR, Chairman.
JOHN H. MUSSER.
FRED MOORE.
FRED W. RANKIN.
CHARLES GORDON HEYD.
W. D. CUTTER, Secretary.

It was moved and seconded that the report of the Council on Medical Education and Hospitals be adopted.

Dr. R. W. Fouts, Nebraska, moved that the word "may," the third word from the end of the report, be changed to "shall," and the motion was seconded by Dr. Francis F. Borzell, Pennsylvania. After discussion by Dr. Olin West, Secretary, this amendment was laid on the table on motion of Dr. A. A. Ross, Texas, seconded by Dr. Robert F. Barber, New York, and carried.

Dr. W. H. Seemann, Louisiana, moved that the report of the Council on Medical Education and Hospitals be adopted, and the motion was seconded by Dr. John Z. Brown Sr., Utah, and carried after discussion.

Report of Committee on Legislative Activities

Dr. F. S. Crockett, Indiana, in the absence of Dr. E. H. Cary, Chairman, presented the following report of the Committee on Legislative Activities, which was referred to the Reference Committee on Legislation and Public Relations:

The Committee on Legislative Activities regrets that owing to the present serious illness of Dr. E. H. Cary, Chairman, this report covers only a portion of committee activities.

Concerning matters of general interest relative to legislative activities in Washington, the committee found no occasion to visit the Capitol. During the year Dr. E. H. Cary and Dr. C. B. Wright from time to time, while there, found opportunity to keep in close touch with the legislative and administrative branches of the government. Extensive correspondence by the committee secretary, Dr. R. L. Sensenich, is evidence of increasing interest by the profession generally.

The Veterans' Administration is now equipped with a total of eighty-one facilities having a bed capacity of 49,558. These

are divided into neuropsychiatric, twenty-six, with 25,648 beds; general medical and surgical, forty-three, with 18,453 beds; tuberculous, twelve, with 5,457 beds. Number of admissions in 1937: neuropsychiatric, 22,183; general medical and surgical, 108,274; tuberculous, 11,080; total, 141,537.

Bills pending in Congress reported in February of this year, proposing new instruction and additional beds to existing facilities, present a rather startling array: neuropsychiatric, 2,194; general medical and surgical, new hospitals, twenty-one, with 5,100 beds and other additional beds, 2,649; tuberculous, 400 beds.

It is worthy of note that this continued and recurring demand for increased building of hospital facilities does not represent the desire of any large group or of the Veterans' Administration. In all probability very few of these bills will be reported out of committee.

Committee activities have included meetings with groups having medical problems or the activities of which might create situations of interest to the profession. The committee participated in the meeting last December of the American Public Health Association, the U. S. Public Health Service and members of the Board of Trustees, where the problem of medical care for the indigent and those whose income is below the subsistence level was considered.

Last December the committee was represented at the annual convention of the Associated Women of the American Farm Bureau Federation. This group has a membership of 475,000 and is affiliated with the American Farm Bureau, which has a membership of over a million. Organized agriculture as represented by this group continues to seek better medical and hospital care for those living in rural districts. Three years ago there was a strong demand for indorsement of measures providing medical care through governmental agencies. Assurances of sympathetic cooperation on the part of our organization and the study of the whole problem succeeded in obtaining a more conservative attitude by this Farm Bureau affiliate.

Since then your committee, with the assistance of Dr. R. G. Leland, Director of the Bureau of Medical Economics, has sought factual data in support of this objective.

Evidence of continued interest on the part of the Farm Bureau women is shown by the following resolution, adopted at their last convention:

HEALTH

A. We express our confidence in the medical and dental professions and appreciate the services rendered in the pursuit of positive health for rural America. However, we realize that the needs in medical care, dental care and hospitalization in rural districts are not provided for adequately because of prohibitive costs;

We therefore request that the medical association join with us in a plan to further the distribution of their services by allowing county medical boards and individual doctors the right to cooperate with groups of rural people in securing adequate health services at a cost commensurate with income of rural families.

B. We urge that the A. F. B. F. support the principles of group medicine and hospitalization on a cooperative basis.

C. We declare our willingness to cooperate with recognized public health agencies in the pursuit of positive health standards, rural and urban.

Local Farm Bureaus are at present negotiating with hospital associations to obtain benefits under the group hospitalization plan, Missouri, Minnesota and Arkansas having reported such activities. In Los Angeles the local Farm Bureaus have contracted with a large medical group for both hospital and medical care on a monthly prepayment plan. According to a report this arrangement has proved very satisfactory to these farm women who find it difficult to understand why such a prepayment plan, to them so desirable, cannot be extended to other localities.

While the problem is too complex for early solution because it is largely local in scope, it is hoped that, through continued cooperation with this group, further study of the many problems involved will result in improvement of medical service to rural areas.

This committee in previous reports has called attention to the necessity of local or county societies giving consideration to the problem that is present in their community. The statement is repeatedly made that charges made in rural communities are still based on mileage in such a manner as to exceed the charges made for like service in urban communities. This may not apply to all rural districts but still constitutes a matter of major complaint. Solution is not to be found in resolution by this House or the headquarters office of the Association but must be obtained through county societies dealing directly with their farm communities.

Respectfully submitted.

E. H. CARY, Chairman.
F. S. CROCKETT.
C. B. WRIGHT.
R. L. SENSENICH.
J. H. J. UPHAM.

Report of Reference Committee on Hygiene and Public Health

Dr. H. B. Everett, Chairman, presented the following report:

1. Resolution on Traveling Hall of Health: While your reference committee favors such advancement enterprises as are described in this resolution, it seems best to recommend that the resolution be referred to the Board of Trustees for consideration and with authority to develop such exhibits if in its judgment they may be produced and managed without undue expense to the Association.

2. Resolutions on Controlled Animal Experimentation: Your reference committee recommends the adoption of these resolutions with slight changes in wording.

3. Resolutions with Respect to Consideration of Butter by Council on Foods, submitted by Dr. J. Gurney Taylor, Wisconsin, and Dr. Fred Moore, Iowa: Your reference committee finds merit in both these resolutions and recommends that the House of Delegates request the Council on Foods to reestablish suitable standards for the acceptance of butter and the advertising associated therewith, and also recommends that the House of Delegates request the Council on Foods to scrutinize carefully the advertising of accepted brands of oleomargarine or butter substitutes to the end that no improper or extravagant claims of nutritional value be associated with the printing of the seal of acceptance of the Council on Foods of the American Medical Association.

4. Resolutions Requesting a Study of American Spas: Your reference committee, before dealing with these resolutions, ascertained from Dr. Morris Fishbein, Editor of THE JOURNAL, that a list of resorts is now being compiled at the office of the American Medical Association. Your reference committee, therefore, sees no advantage in acting on these resolutions.

Respectfully submitted.

H. B. EVERETT, Chairman.
CHARLES H. GOODRICH.
J. F. HASSIG.
JOSEPH F. SMITH.
CHARLES S. SKAGGS.

On motion of Dr. Everett, seconded by Dr. Felix P. Miller, Texas, and carried, the first section of the report of the reference committee was adopted.

The second section of the report of the reference committee was, on recommendation of Dr. Arthur J. Bedell, Section on Ophthalmology, referred back to the reference committee for revision, for deletion of many repetitive expressions in the resolutions and for making a further report.

Dr. Everett moved that the third section of the report of the reference committee be adopted. The motion was seconded by Dr. A. T. McCormack, Kentucky, and carried after discussion.

It was moved by Dr. Everett, seconded by Dr. A. T. McCormack, Kentucky, and carried, that the fourth section of the report be adopted.

On motion of Dr. Everett, seconded by Dr. A. T. McCormack, Kentucky, and carried, the report of the reference committee was adopted as a whole with the exception of the portion of the report that was referred back to the reference committee.

Report of the Reference Committee on Miscellaneous Business

The Vice Speaker, Dr. H. H. Shoulders, took the chair and called for the report of the Reference Committee on Miscellaneous Business.

Dr. Fred Moore, Chairman, presented the following report:

1. Resolution on Rockefeller Cancer Control Fund: Your committee approves of the principles suggested, provided the majority of the Advisory Council is composed of physicians who are members of the American Medical Association and provided, further, that the work be limited to the treatment of cancer as indicated in this resolution.

2. Resolution on Sulfanilamide: Your committee approves the resolution presented by Dr. Burt R. Shurly, Section on Laryngology, Otology and Rhinology, regarding the sale and use of sulfanilamide.

3. Resolution on Fee Schedules: This resolution, presented by Dr. Charles W. Roberts, Georgia, is very broad in its scope and involves all the questions which may develop from consideration of fee schedules. The resolution requests that the subject be "examined by an appropriate agency of the American Medical Association, to the end that the Association may declare itself on certain controversial points." Your committee believes that such a study should be made and recommends that this resolution be referred to the Bureau of Medical Economics for the conduct of such study. It further recommends that the Bureau of Medical Economics be instructed to submit its report to this House of Delegates at the next annual session.

Respectfully submitted.

FRED MOORE, Chairman.
E. S. HAMILTON.
WALT P. CONAWAY.
F. S. CROCKETT.
E. L. HENDERSON.

On motions of Dr. Moore, duly seconded and carried after discussion, the report of the reference committee was adopted section by section and as a whole.

Address of Past President Hubert Work

Dr. N. B. Van Etten, Speaker, presented to the House Dr. Hubert Work, Past President of the Association, who addressed the House as follows:

Mr. Speaker and Members of the House of Delegates:

When the Sergeant-at-Arms, Holman Taylor, arrested me in the corner and confronted me, the only thing I could think of to say was to cry out "Does no one here know Rip Van Winkle?" But some one evidently did and I thank you, Mr. Speaker, for the opportunity to look these men in the face again. It recalls many old and many pleasant memories. For four years I stood before you and as I remarked to a friend when a motion was defeated recently, "They can't put it over the House of Delegates, because I tried it for four years and never succeeded."

Report of Reference Committee on Amendments to the Constitution and By-Laws

The Speaker, Dr. N. B. Van Etten, resumed the Chair.

Dr. Henry A. Luce, Chairman, presented the following report:

REPORT OF JUDICIAL COUNCIL

Your Reference Committee on Amendments to the Constitution and By-Laws has studied with pride the report of the Judicial Council and commends the activities of the Judicial Council for its luminous and splendid work as evidenced by its clearcut and forcible report, as illustrated under the headings "Discipline by Resolutions," "Study of Constitutions and By-Laws," "Rental of Radium," "Physicians and Cultists" and "Finality of State Action."

Association of Physicians and Cultists: Your committee wishes to endorse emphatically that part of the report of the Judicial Council pertaining to the association of physicians and cultists and to state that it is the feeling of your committee that this should be incorporated as a firm principle governing the course of action of physicians generally.

Your committee further suggests that this part of the report is sufficiently important to be brought to the attention of the officers of the various state medical associations, with the request that this matter be brought to the attention of their respective general assemblies.

Rental of Radium: There was an objection to the last sentence in that paragraph pertaining to rental of radium, which the committee considered most carefully. After due consideration of the matter, your committee feels that the phraseology should remain. Any exceptions to the general principle involved would defeat its purpose.

Study of Constitutions and By-Laws: In view of the rapidly changing conditions of medical practice, that portion of the report of the Judicial Council dealing with the study of the constitutions and by-laws is of utmost importance. The recommendation made in the report regarding the supervision of various types of medical care by the state society is especially to be stressed as is the fact that the constitutions and by-laws of the component county societies should conform with those of the state society.

It is further recommended that the constituent state organizations consult with the Judicial Council in such cases when changes in the constitutions are deemed necessary.

PROPOSED AMENDMENTS TO THE CONSTITUTION AND BY-LAWS

Your committee approves the adoption of the following recommendation from the Chairman of the Council on Scientific Assembly:

Amend Chapter IX, Section 3, of the By-Laws by adding to the end of item (6) the following: "and with the cooperation of the section officers to combine section programs and to arrange such other changes as may seem advisable," in order that when so amended Chapter IX, Section 3, item (6) will read as follows: "(6) to arrange the programs for the general meetings of the Scientific Assembly and with the cooperation of the section officers to combine section programs and to arrange such other changes as may seem advisable."

Change in name of Bureau of Health and Public Instruction: That matter referred to the committee relative to the proposed change in name of the Bureau of Health and Public Instruction to the Bureau of Health Education has been approved by your committee, which recommends that Chapter VI, Section 2, be amended to read as follows:

SEC. 2. TO ESTABLISH BUREAU OF HEALTH EDUCATION.—The Board of Trustees shall establish a bureau, to be known as the Bureau of Health Education, to carry on such activities in the field of health and the dissemination of information in relation thereto as the House of Delegates may direct or the Board of Trustees, in the absence of such directions, may determine. (As adopted, 1923, and amended, 1938.)

Your committee recommends to the House of Delegates the adoption of the proposed amendment to the Constitution as set forth in the following resolution submitted at the annual session of the Association held in Atlantic City in 1937 by the Judicial Council:

WHEREAS, The Constitution and the By-Laws refer to the election annually of a President and President-Elect when in fact only a President-Elect is elected; and

WHEREAS, No provision is made in the Constitution and By-Laws for a succession in office in case of death or disability of the President-Elect; be it

Resolved, That article 6, section 2, of the Constitution be amended to read: "(a) The President-Elect shall be elected annually. He shall serve as President-Elect until the annual session of the Association next ensuing after his election and shall become President on his installation in the course of that session, serving thereafter as President until the next following annual session and the installation of his successor. If the President-Elect dies, resigns or, in the judgment of the Board of Trustees, confirmed by the House of Delegates, is permanently disqualified for the performance of the duties of his office by any just cause, the Vice President shall become President-Elect and in due course succeed to the presidency, with all of the prerogatives and duties pertaining to that office, as fully as if elected to it in the first instance: Provided, however, that the President-Elect who is elected at the annual session of the Association in 1937 shall, notwithstanding his election as such for the period of one year only, be installed as President in the course of the session in 1938 and continue as such until the session in 1939 and the installation of his successor.

(b) A Vice President, a Secretary, a Treasurer, and a Speaker and a Vice Speaker of the House of Delegates shall be elected, each to serve for one year and until his successor is elected and installed: Provided, however, that in event of the death, resignation or removal, or of the permanent disability of the President-Elect as determined by the Board of Trustees, the Vice President shall succeed to the office of President-Elect and in due course to the office of President, notwithstanding the fact that he was in the first instance elected as Vice President for one year only."

Changes in By-Laws proposed by Michigan State Medical Society: Relative to the proposed changes in the By-Laws as introduced to the House at the request of the executive committee of the Michigan State Medical Society and referred to this committee, your committee feels that the motivation of this proposal is comparable to that which led to the introduction of the resolutions presented by Dr. Lyell C. Kinney, California. Your committee requests permission to delay the report on this particular portion until the Thursday meeting of the House of Delegates, and requests that the House authorize the committees to which these resolutions and changes were referred to meet in a joint meeting for the determination of the group thinking on this important matter.

Respectfully submitted.

H. A. LUCE, Chairman.
HERBERT L. BRYANS.
GEORGE P. JOHNSTON.
CHARLES J. WHALEN.
RAYMOND L. ZECH.

On motions of Dr. Luce, duly seconded and carried after discussion, the report of the reference committee was adopted section by section.

On motion of Dr. Luce, seconded by Dr. J. Gurney Taylor, Wisconsin, and carried, the amendments to the Constitution and By-Laws as recommended in the report of the reference committee were adopted unanimously.

Dr. Luce moved that the House authorize the respective committees referred to in the section of the report of the reference committee referring to the changes in the By-Laws proposed by the Michigan State Medical Society to meet jointly and bring in a combined report. The motion was seconded by Dr. John Z. Brown Sr., Utah, and carried.

Report of Reference Committee on Reports of Officers

The Vice Speaker, Dr. H. H. Shoulders, took the chair and called for the report of the Reference Committee on Reports of Officers.

Dr. J. N. Baker, Chairman, presented the following report:

Your Reference Committee on Reports of Officers, after reviewing these addresses to the Association, has pleasure in submitting the following report:

1. The Address of the President: The President, after an arduous year of service to the Association in visitation of state and district medical groups throughout all sections of the country, crystallizes, in concrete fashion, certain impressions gained through these many contacts.

He first directs attention to the avidity of the general membership for self improvement in medical knowledge, as manifested by the ever mounting number of scientific medical societies. He wisely points to the need for caution, on the part of purely scientific medical groups or their chosen officers, in any pronouncement on questions of medical polity affecting the entire profession. Your committee feels that the official machinery for organized medicine through which all questions of national policy and of ethics should rightfully clear, is the House of Delegates of the American Medical Association, and that it is incumbent on this body to preserve the truly democratic spirit in which this organization has been conceived, alike in its own deliberations, in the behavior of its chosen officials and in the conduct of its official mouthpiece—THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. In these troublous times of social unrest there is real need, on organized medicine's part, for a tolerant attitude of openmindedness, which should ultimately lead to less internal discord and to a more wholesome appreciation, on the public's part, of the high ideals and principles of our profession.

Other impressions received through the President's many contacts have been an awakened interest within the profession in all socio-economic problems now confronting society, together with an avowed and determined purpose to see to it that organized medicine proves no laggard in contributing a full share toward their solution.

The President closes his thoughtful address by making an earnest plea for full and whole-hearted cooperation by the entire medical profession in the nationwide campaign now in the offing against that ubiquitous enemy of mankind, syphilis.

2. Address of the President-Elect: The President-Elect, without wastage of time or words in felicitous salutation, embarks forthright on a brief yet lucid presentation of two topics of paramount concern to the members of this organization.

The first is the need, in these critical times of social instability and readjustment, for the preservation of the ethical principles of medical practice, evolved through centuries of mankind's murky gropings to higher intellectual and social levels. These intangibles, while difficult of comprehension by the lay mind, constitute real and vital things and are the heritages and traditions of an ancient and honorable profession. He views with enthusiasm and deep concern the nationwide survey of medical needs now being prosecuted by state and county medical societies under the leadership of the American Medical Association. Out of such a study, seriously and earnestly made by doctors, your President-Elect feels, should come a wealth of material bearing on the social and economic factors within a given state or community, which, when known, should lead to a clearer definition of the problem of medical needs and to sounder recommendations on the part of the medical profession in meeting existing needs. It is further pointed out that while physicians continue to contribute freely of their time and talent to charity—estimated to be approximately a million dollars daily—yet the indigent and semi-indigent medical load continues to grow apace, and that the information gleaned from this survey should lead to plans for solution in consonance with the basic principles of sound medical practice.

The second topic stressed by the President-Elect is that of graduate medical education, both for the perfection of specialists in the several fields of medicine and for the continuing improvement of the general practitioner, the aggregate of whom constitutes medicine's first line of defense. He commends the untiring efforts now being put forth in this field both by the state and by county medical societies, guided and stimulated by this Association, and makes an urgent plea for an ever widening expansion of these refresher courses for physicians so circumstanced as not to be able to procure these advantages in the larger teaching centers.

3. Address of the Speaker: The Speaker, by way of introduction and in order to point the moral for the need of knowing one's business, lifts from Aesop's fables the story of the elephant which attempted to play the part of a mother bird.

Then follows a series of searching and pertinent questions over which every physician will do well to ponder: "Are we properly mixing our sociology with our medicine?" "Are we really altruistic or are we dominated by a mass of individual economic desires?" "Do we, or do we not, correctly interpret the opinions of the medical profession of the United States?"

Having propounded these and other timely questions, he points to the great responsibility resting on this body, the House of Delegates, which constitutes the legal machinery and which serves as the official mouthpiece of orthodox medicine throughout the nation. "On your shoulders," he says, "rests the fate of American medicine."

He then makes an earnest plea that this body assume a statesmanlike attitude toward all the manifold problems presented by modern-day society and that it dedicate itself anew in efforts to aid in their solution.

Your reference committee feels that the counsel contained in this message is so timely and of such importance, not only to the members of this body but also to every practicing physician that it recommends that the matter be given a conspicuous place in THE JOURNAL of the Association.

Your reference committee finds that these addresses, while brief and concise, are scholarly, timely and of a high order of excellence, and commends them to the careful reading of the Association's entire membership.

Respectfully submitted.

J. N. BAKER, Chairman.
ELBRIDGE J. BEST.
BEN R. MCCLELLAN.
RICHARD H. MILLER.
ARTHUR C. MORGAN.

On motions of Dr. Baker, duly seconded and carried after discussion, the report of the Reference Committee on Reports of Officers was adopted section by section and as a whole.

NEW BUSINESS

Resolution on Teaching in Schools of Chiropody

Dr. G. Henry Mundt, Illinois, presented the following resolution, which was referred to the Judicial Council:

WHEREAS, The American Medical Association has declared it unethical for members to teach in schools of optometry; and

WHEREAS, In the annual report of the Judicial Council of the American Medical Association we find these words: "Teaching in cultist schools and addressing cultist societies is even more reprehensible, for such activities give public approval by the medical profession to a system of healing known to the profession to be substandard, incorrect and harmful to the people because of its deficiencies"; and

WHEREAS, Members of the American Medical Association are now serving on the faculties of schools of chiropody; therefore be it

Resolved, That the House of Delegates of the American Medical Association deems such practice unethical.

Resolutions on Services of Section Delegates

Dr. Charles W. Roberts, Georgia, presented the following resolutions, which were referred to the Reference Committee on Miscellaneous Business:

WHEREAS, There are multiplying evidences of the zeal exemplified by the delegates from the sections in preserving and interpreting to the various special societies in which they hold membership the policies and principles of the House of Delegates of the American Medical Association; and

WHEREAS, There is need in this critical period for wide recognition of the fact that the House of Delegates of the American Medical Association is the only body in this country entitled by election on a democratic basis to speak in the name of American medicine on the questions of social, economic, ethical and clinical relations of the doctor to the delivery of medical care; and

WHEREAS, These noteworthy activities of the delegates for the sections in the aforementioned fields are worthy of emulation by all delegates in their relations to medical societies composed of but not sponsored by organized medicine; therefore be it

Resolved, That the House of Delegates express to the delegates from the sections its appreciation of their constructive services to the Association; and be it further

Resolved, That they and all other delegates be encouraged to continue their efforts to the end that the quality of medical service to the American people may be preserved.

Resolution Dealing with Alcoholic Intoxication

Dr. Thomas F. Thornton, Iowa, presented the following resolution, which was referred to the Reference Committee on Miscellaneous Business:

WHEREAS, The medical and legal professions, the courts and the public have been repeatedly unable to determine legally the sobriety or the degree of intoxication of individuals accused of violating the established rules and laws of safety; and

WHEREAS, Such inefficient methods of clinical and laboratory diagnosis and legal procedures are unscientific and a direct cause of much unnecessary expense, litigation and suffering and directly encourage minor verdicts for major offenses; therefore be it

Resolved, That the executive council of the Iowa State Medical Society ask the cooperation of the American Medical Association in a study looking toward the determination of definite, legally acceptable, scientific clinical and laboratory tests for alcoholic intoxication by

1. Studying and recommending such clinical and laboratory tests as have proved successful in Europe and in this country;
2. Prescribing a standard of qualifications of the persons, laboratories and hospitals taking and making these tests;
3. Suggesting such legislation as may be necessary to establish these clinical and laboratory tests;
4. Coordinating the medical and legal profession with the various police agencies and safety councils in this activity; and
5. Suggesting adequate financial support from such funds as may be available from the liquor license tax or elsewhere to supply equipment necessary to taking and making such tests.

Resolution Approving in Principle the Indiana Plan of Health Education and Preventive Medicine

Dr. H. G. Hamer, Indiana, presented the following resolution, which was referred to the Reference Committee on Medical Education:

WHEREAS, A pressing need exists for the development of a national policy on the part of organized medicine to bring the benefits of preventive medicine to all the people; and

WHEREAS, The medical profession, through its local county and state medical societies, already has made tremendous progress in developing programs local in scope; and

WHEREAS, A program of professional and lay health education is now functioning successfully in Indiana; and

WHEREAS, The profession in controlling tuberculosis, malaria, typhoid, diarrhea, yellow fever, puerperal sepsis and other infectious diseases has been largely responsible for the present favorable morbidity and mortality rates; and

WHEREAS, It is essential to make preventive medicine an integral part of organized medicine and individual private practice; and

WHEREAS, In order to put into immediate action at this session of the House a suggestion so ably stated on numerous occasions that "the attention of state and county societies should be drawn to the opportunity of assuming a definite leadership in the respective states and counties and directed with the best ideals of medicine and the best interests of the public"; therefore be it

Resolved, That the House of Delegates of the American Medical Association approves in principle the Indiana plan, a copy of which follows, of health education and preventive medicine and directs the Bureau of Health Education of the American Medical Association to bring this plan to the attention of the medical profession and the lay public through all available channels.

TWO BIRDS WITH ONE STONE
(THE TWO BIRDS "DISEASE" AND "SOCIALIZED MEDICINE")
INDIANA SUGGESTS A
WORKABLE PLAN
TO PROTECT THE HEALTH OF THE
PEOPLE OF THE UNITED STATES

AN ANTIDOTE FOR STATE MEDICINE

Frequently today the physician finds articles in the press questioning his efficiency and his methods of practice. Such articles accuse him of ignoring preventive medicine in his daily work. He is bewildered and defensive in his attitude, for he feels that he is doing his job well. Even superficial observation will disclose the marked drop in death rate as a result of measures instituted by the medical profession in controlling tuberculosis, malaria, typhoid, diarrhea, yellow fever, puerperal sepsis and other infectious diseases. Preventive medicine is now being practiced by all physicians as private practitioners to some degree. In many parts of the state, county medical units have a definite program. The time is ripe to correlate these scattered activities, survey our local situations, and acquaint the public with the extent of this phase of our work.

Many phases of preventive medicine have advanced by stimulation from outside groups. Drives have been sponsored with much misunderstanding. Preventive medicine has now reached its maturity and should be utilized to the fullest by organized medicine and by the individual doctor. It is futile for one county or state to try to promote this alone. Disease and disaster are not aware of state borders. A national policy on the part of organized medicine is needed now.

Too long have we kept our light under a bushel. It is time to take the offensive. The amount of preventive medicine can be increased by the private practitioner with definite benefit to his community and to himself, and the public will be made to realize that American Medicine is pliable enough to continue as an individualistic enterprise.

Throughout the ages, medicine has adapted itself to social changes. We are now in one of those states of changing social customs and aspirations. The American public looks to organized medicine for leadership. Prevention of disease, early recognition of defects and diseases, reduction of hazards and prolongation of life are the important functions of a physician.

In Indiana we have visualized preventive medicine as a wheel with each spoke representing some important phase. Each phase is featured as a "Topic of the Month" in the *Journal of the Indiana State Medical Association* and is announced or discussed in each county medical society the month the subject is featured. The topic of the month is given support in the press and is discussed by speakers before medical and lay groups.

TOPICS OF THE MONTH

January—Formulation of Plan.
February—Syphilis.
March—Pneumonia.
April—Diphtheria.
May—Maternal and Child Health.
June—Crippled Children.
July—Highway Accidents.
August—Occupational Diseases.
September—Annual Physical Examinations and Heart Disease.

October—Conservation of Eyesight.
November—Tuberculosis.
December—Smallpox.

PURPOSE

To promote aggressive leadership by Organized Medicine in Prevention of Disease and early detection of defects.

To incorporate preventive medicine as an important phase of private practice and of county medical activity.

To promote a National Health Program with emphasis on Prevention of Disease sponsored by the American Medical Association with due regard for local situations.

Our modern age demands cooperative efforts by organized medicine to distribute modern medicine.

DIVIDENDS OR RESULTS

1. Create good will and public approval.
2. Raise general standard of medical practice.
3. Prevent many deaths and much suffering.
4. Give a better ordered life for the doctor.
5. Give a steadier income for the doctor.
6. Intelligent defense against disease is our best defense against government encroachment.

ALTERNATIVE

Noisy and aggressive lay groups will seize leadership and we will trail behind, cloaked with heavy governmental supervision.

SYPHILIS

"NO BABY BORN WITH SYPHILIS IN INDIANA BY 1940"
Can be controlled by:

1. Premarital examination including blood test.
2. Blood test early in every pregnancy.
3. Making good treatment available to all.
4. Good laboratory service available to all.
5. Reporting of new cases by name or number to health department.
6. Tracing contacts by trained social investigators.
7. Free distribution of drugs for medically indigent patients.
8. Isolation of infectious, noncooperative cases.
9. Making provision for infectious transient or itinerant.
10. Cooperation of private physicians and public clinics.
11. Developing and popularizing a minimum standard of treatment for early syphilis.
12. Continuing the educational program among medical and lay groups.
13. Helping the Negro solve his syphilis problem.
14. Spinal puncture on every treated case.
15. Spending the syphilis dollar where it counts.

PNEUMONIA

1. Leadership by the medical profession in developing a complete pneumonia program for all the people.
2. Recognition by the physician of the importance of early diagnosis and early treatment of pneumonia and the use of life-saving types of serum.
3. Development of facilities so that typing may be done within four to six hours.
4. Appointment of committees by state and county medical societies for special studies in pneumonia.
5. Adequate nursing care for home cases.
6. Development of adequate hospital facilities.
7. Education of the public as to the gravity of the whole pneumonia problem, and the fact that the common cold often is an antecedent for pneumonia.
8. Education of the public as to what may be expected if pneumonia is properly handled.
9. Formation of serum "banks" in order to supply serum immediately and free to the indigent or on proper credit to those who are solvent but incapacitated.
10. Try to lower the cost of present forms of treatment.
11. Usual well established supportive treatment indicated in addition to serum treatment.
12. Teach the physicians generally the importance of early typing of every suspected pneumonia.

DIPHTHERIA

1. Immunization of every child at 1 year of age by family doctor.
2. Accomplished by following plan:

When child is 1 year of age local health officer sends a double postcard to the parents stating that it is the judgment of organized medicine and health authorities that now is the time to immunize the child against diphtheria and to see the family doctor at once. When the injections have been completed the doctor returns the second half of the card to the health officer.

If immunization of the child is unpractical from the standpoint of (1) finances, (2) moved away, (3) death of child, (4) religious objection of parents, the parents are asked to check and return. The medically indigent are handled according to the customs of the community.

3. When child enters school he receives a Schick test or another injection of toxoid.

No Drives—No Misunderstandings—Constant Pressure

MATERNAL AND CHILD-HEALTH
"SAFE MATERNITY—HEALTHY CHILDREN"

1. Good antepartum care available to all.
2. Nursing assistance at home deliveries.
3. Continued study of the causes of maternal and infant mortality by organized medicine.
4. Inquiry as to cause of each individual death by the state committee and hospital staff.
5. Immunization program for all children.
6. School health programs—physical health education—distribution of literature on health.
7. County public health nursing program under medical advisory committees of local counties.
8. Mental hygiene program for children.
9. Dental educational and reconstruction program.
10. Postgraduate work for physicians, dentists and nurses.

CRIPPLED CHILDREN
"CORRECT REMEDIAL DEFECTS EARLY"

1. Include in birth certificates the presence or absence of congenital defects.
2. Cooperation of state medical association through advisory committee.
3. Nurses contact physicians, who report cases.
4. Early consultation made available to all.
5. Children treated in approved hospital near home if possible.
6. Schools for crippled children in the larger cities.
7. Reciprocal arrangements between states for transient crippled child.
8. Find and offer aid to the older crippled child.

HIGHWAY ACCIDENTS

1. A study by organized medicine of the causes of death from highway accidents.
2. Assist the law enforcement agencies in reducing the hazards of the careless and drinking driver.
3. Aptitude test on the repeating offenders.
4. Probationary period for young drivers.
5. Cooperate with the American Red Cross in first aid instruction.
6. Filling station attendants to be given instruction in first aid.
7. Develop protection for the doctors and hospitals from irresponsible injured.

OCCUPATIONAL DISEASES

Occupational diseases form approximately 2 per cent of the total disability from industrial causes.

1. Assist employers to cope with employees' health problems with cooperative attitude on the part of the medical profession.
2. Preemployment thorough physical examination.
3. Periodic health examination. (If routine blood tests are made on the employees, treat—don't fire.)
4. Majority of occupational diseases are skin infections, many of which are preventable.
5. Patch testing of employees in occupations producing dermatitis will greatly decrease illness.
6. Teamwork of industrial physician and general practitioner is very desirable.
7. Industrial physician should direct patients with diseases other than those resulting from employment into the channels of ordinary practice.
8. Find the job that best fits the employee physically.
9. Use existing hospital facilities as much as possible.

ANNUAL PHYSICAL EXAMINATION AND HEART DISEASE

1. Educate physicians in better recognition of heart disease.
2. Teach the newer methods of studying functional capacity of the heart.
3. Teach the seriousness of "mild" infections as a background for heart crippling.
4. Teach the role of weight, heredity and environment in the production of hypertension.
5. Educate the physician and layman as to the seriousness of rheumatic infections.
6. Continue to emphasize the role played by syphilis in the problem of heart disease.
7. Train heart cripples of all ages in pursuits that permit them to accommodate their defects.
8. Educate physicians and the public in the importance of periodic examinations.
9. Urge the need for careful periodic examinations after middle life.
10. Stress the need for certain laboratory and x-ray studies at regular intervals: urinalysis, serologic, electrocardiographic and similar laboratory procedures.

CONSERVATION OF EYESIGHT

1. Ophthalmia Neonatorum. Prevent by prompt instillation of silver nitrate, 1 per cent or 2 per cent solution, into the eyes of the newborn.
2. Squint or crossed eyes. Begin treatment not later than age 2.
3. Discourage the use of high explosive fireworks in the hands of children. Reduce fourth of July eye injuries.
4. Examination of school children for visual defects.
5. Avoid eyestrain. A. Correct visual defects. B. Prevent and treat diseases of the eye. C. Install proper lighting. D. Reasonable use of the eyes according to effects of use.
6. Help reduce hazards from industrial accidents.
7. Early detection and treatment of syphilis will reduce blindness.
8. Wipe out trachoma in Indiana.

TUBERCULOSIS

1. Physical examination of every child at age 16, including tuberculin test.
2. Thorough physical examination on entering college or industry.
3. Examination of all nurses on entering training and recheck at regular intervals.
4. X-ray available for positive reactors.
5. Trace contacts and examine.
6. Protect the community from infectious cases by adequate number of hospital beds.
7. Concentration on detection of early cases.
8. Cooperation with antituberculosis association and public health nursing organizations.
9. Continue educational program in high schools.
10. Use collapse therapy when indicated.
11. Rehabilitation program.

SMALLPOX

1. Vaccinate every child at age of 1 year after completion of diptheria immunization.
2. Vaccinate again on entering grade school and thereafter at regular intervals by the family doctor.

Extend the scope of preventive medicine to include other infectious diseases and metabolic disturbances as methods are proved to control them.

THE INDIVIDUAL'S MEDICAL SERVICE CHART THROUGH LIFE

Three Months Pregnant	
Measurement of pelvis Blood pressure—urine Wassermann test	Reduction in maternal mortality Prevention of congenital syphilis
At Birth	
Silver nitrate in baby's eyes	Prevention of blindness (ophthalmia neonatorum)
First Week	
Physical examination of baby	Recognition and correction of remedial defects
First Year	
Correct infant feeding	Prevention of diarrhea-rickets and scurvy
One Year of Age	
Immunization and vaccination	Prevention of diphtheria and smallpox
Two to Fifteen	
Annual check-up by the family physician	Individual health education
Sixteen Years	
Physical examination with special attention to lungs	Prevention and early recognition of tuberculosis
Before Marriage	
Premarital examination	Recognition of venereal diseases
Adult Life	
Annual physical examination	Prevention of heart disease

Reduction in Hazards

1. Venereal disease
2. Pneumonia control
3. Highway accidents
4. Typhoid
5. Nervous disorders
6. Occupational disease
7. Cancer

Bureau of Publicity
Indiana State Medical Association
1021 Hume-Mansur Building
Indianapolis, Indiana

Resolution Requesting that Editor of The Journal Be Instructed to Confine His Writings to Official Publications of American Medical Association

Dr. Spencer T. Snedecor, New Jersey, presented the following resolution, which was referred to the Reference Committee on Executive Session:

WHEREAS, The Editor of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION is accepted and referred to by the press of the nation as the spokesman of organized medicine; and

WHEREAS, The said Editor conducts a column in the daily press that advises as to health; and

WHEREAS, The said Editor has edited a "Modern Home Medical Adviser," the newspaper advertisement of which claims "money could not buy better health guidance"; and

WHEREAS, The said Editor has admitted he has control over the advertising of this book; therefore be it

Resolved, That the Delegates from New Jersey to the American Medical Association are hereby instructed to introduce a motion into the House of Delegates of the American Medical Association requesting the Board of Trustees of the American Medical Association to instruct said Editor to confine his writings to the official publications of the American Medical Association.

Greetings from Organizations

The Secretary announced that a number of greetings had been received, only two of which were in the form of formal presentation. The Secretary read the two formal messages, the first a telegram from the North American Record Librarians and the second a letter from the president of the Judiciary

Board of the California State Conference of the Bricklayers, Masons and Plasterers of the International Union of America, as follows:

1. North American Record Librarians send heartiest greetings for successful convention. JENNIE C. JONES, President.

2. Trusting your convention and visit to San Francisco and California will be of great benefit to mankind, as well as a satisfaction and pleasure to yourselves. Sincerely, L. C. (HARRY) BLUM.

Attendance at Executive Session

The Speaker announced that when the House reconvenes it will do so in Executive Session and that no one will be admitted except the members of the House and, unless there be objection, the presidents and secretaries of constituent state medical associations and the executive secretaries and employees of the headquarters staff.

On motion of Dr. John Z. Brown Sr., Utah, seconded by Dr. George W. Kosmak, New York, and carried, Dr. Horace Reed, alternate delegate from Oklahoma, was invited to attend the Executive Session.

It was moved by Dr. George W. Kosmak, New York, seconded by Dr. John Z. Brown Sr., Utah, and carried, that when the House recess it do so to meet at 2 p. m.

Dr. Arthur J. Bedell, Section on Ophthalmology, moved that the representative of the Canadian Medical Association and the representative of the New Zealand Branch of the British Medical Association appear on Thursday, June 16, to present greetings. The motion was seconded by Dr. H. B. Everett, Tennessee, and carried.

The House recessed at 12:15 p. m. to reconvene in Executive Session at 2 p. m.

Executive Session—Tuesday Afternoon, June 14

The House of Delegates was called to order by the Speaker, Dr. N. B. Van Etten.

The Sergeants-at-Arms polled the House, after which the House went into Executive Session at 2:20 p. m.

Action of Committee of the Whole on Resolution Relative to Editor's Writings

Dr. Frederic E. Sondern, New York, asked whether the Reference Committee on Executive Session was ready to report on the resolution introduced from New Jersey relative to the Editor of THE JOURNAL and was informed by Dr. J. D. Brook, Chairman of the Reference Committee on Executive Session, that that committee had had no opportunity to consider the resolution nor to grant a hearing to the New Jersey delegation, which had been requested, and could not therefore report at the present time.

Dr. Sondern then moved that the resolution be considered by the House at once because of the importance and urgency of the matter, and that it be considered by the House as a Committee of the Whole. The motion was seconded by Dr. Charles W. Roberts, Georgia, and Dr. Arthur J. Bedell, Section on Ophthalmology, and carried after discussion by Drs. Spencer T. Snedecor, New Jersey; Charles Gordon Heyd, Council on Medical Education and Hospitals, and Morris Fishbein, Editor of THE JOURNAL.

Dr. Sondern then moved that this matter be withdrawn from the Reference Committee on Executive Session so that it could be considered by the House, and the motion was seconded by Dr. George W. Kosmak, New York, and carried.

Dr. Sondern further moved that the House of Delegates resolve itself into a Committee of the Whole for greater freedom of debate. Dr. James E. Paullin, Section on Practice of Medicine, seconded the motion and it was carried.

The House of Delegates resolved itself into a Committee of the Whole at 2:28 p. m., with Dr. Frederic E. Sondern, New York, presiding.

The House reconvened in Executive Session at 3:10 p. m., with the Speaker, Dr. N. B. Van Etten, in the Chair.

Dr. Frederic E. Sondern, Chairman, presented the following report:

The Committee of the Whole recommends that the House of Delegates express its complete confidence in and respect for the Editor of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION and bid him godspeed in going forward in the splendid work he is doing.

The Committee of the Whole recommends that the resolution introduced from New Jersey relative to the Editor of THE JOURNAL be defeated.

Dr. Sondern moved that the first recommendation of the Committee of the Whole, expressing confidence in and respect for the Editor, be adopted, and the motion was seconded and carried unanimously.

On motion of Dr. Sondern, seconded by Dr. A. T. McCormack, Kentucky, and carried by a rising vote which was unanimous, the House approved the second section of the report of the Committee of the Whole rejecting the resolution introduced from New Jersey.

Special Committee on Publicity

The Speaker appointed the following delegates as a Special Committee on Publicity to censor the publicity emerging from the discussions of the afternoon meeting of the House: Dr. W. H. Seemann, Louisiana, Chairman; Dr. Lewis B. Bates, Isthmian Canal Zone, and Dr. Edgar A. Hines, South Carolina.

Address Prepared by Miss Josephine Roche

Dr. Olin West, Secretary, stated that Miss Josephine Roche, Chairman of the Interdepartmental Committee to Co-ordinate Health and Welfare Activities of the Federal Government, had accepted an invitation forwarded to her on instructions from the Board of Trustees to discuss the work and plans of the committee of which she is chairman, but stated that there was a possibility that she could not attend, and later the following telegram was received:

I deeply regret commitments mentioned in my letter of June 4 make it impossible to be with you to address the House of Delegates on Tuesday, June 14. No other member Interdepartmental Committee available.

The Secretary stated further that he had since received the following message from Miss Roche:

I have talked with the Surgeon General of the United States Public Health Service and he is asking Dr. Warren F. Draper (a member of this House of Delegates) to be ready to read my paper on the work of the Interdepartmental Committee if your Board of Trustees wishes this done. I cannot tell you how disappointed I am not to meet with you and how very much your courtesy is and will continue to be appreciated.

Dr. Warren F. Draper, United States Public Health Service, read the following address submitted by Miss Josephine Roche, which was referred to the Reference Committee on Executive Session, which was asked to retire at once and if possible bring back a report so that it might be considered immediately:

The Interdepartmental Committee was created in August 1935, following the passage of the Social Security Act, in order that the full benefits of the varied federal program under the act's provisions might reach with minimum delay and maximum effectiveness the individual men, women and children for whose aid and service the program was brought into existence. Obviously, duplication of work and effort, conflict in policy or procedure among federal agencies had to be prevented, and common understanding and action developed if the values of the program were to be translated quickly into realities.

As members of this committee, the President designated four assistant secretaries of government departments—the Treasury, Interior, Agriculture and Labor—and the chairman of the Social Security Board.

The committee's first task was the setting up of technical committees to work out immediately cooperative agreements between federal agencies functioning together in the states. Two may be used as illustrations: the agreement between the United States Public Health Service and the Children's Bureau on public health nursing, and the agreement between the United States Public Health Service and the Division of Labor Standards, on industrial hygiene.

The technical committee of Children's Bureau and United States Public Health Service representatives worked out an agreement defining the objectives, setting standards of service, and committing both the Children's Bureau and the Public Health Service to a joint approach to the various state health departments, so that efforts of the two agencies should not be retarded by any duplication of effort or multiplicity of super-

vising units, with the inevitable misunderstandings and confusion in the field which would result.

The industrial hygiene agreement was the result of a desire on the part of the Department of Labor and the Public Health Service to promote in the states the establishment of industrial hygiene units in the state health departments which would cooperate with the state labor agencies in the pursuance of the common objective—protection of the working population from industrial health hazards.

Other technical committees working out similar interdepartmental agreements for administrative coordination are those on crippled children and the needy blind.

While there has not been, of course, 100 per cent success in eliminating duplication of effort and competition between interested agencies in the states, we are convinced that the three years experience has evolved a useful and unique mechanism for coordinated procedure: useful in that technical groups may meet together and, through conference and interchange of experience, approach mutual understanding and agreement based on a solid foundation of fact; unique in its simple combination of facilities to provide direct administrative action when technical groups have determined the procedures through which harmony of action may be achieved.

Working under the instruction of the executive order "to study and make recommendations concerning specific aspects of the health and welfare activities of the government" are the technical committees on recreation, nutrition, crime prevention and parole, and medical care.

In the work of the last-named committee you have, of course, a special interest, and our interdepartmental committee is deeply grateful and encouraged to know that a number of you, including some of the officers of the American Medical Association, are to be with us at our national health conference July 18, 19 and 20, when the full report of this technical committee will be submitted and discussed.

At the time the Technical Committee on Medical Care was formed the national health survey of the Public Health Service was nearing completion. You are familiar with the results of that survey, covering, as it did, some 800,000 families, including 2,800,000 persons, and supplemented by reports from physicians, health officers, and institutions providing medical services. This survey made it possible to measure health needs quantitatively and to determine the degree of correlation among all the factors involved. It provided an index not only to the prevalence of disabling illness for the population as a whole but according to age, sex, occupation, family income, living standard and size of community. It made it possible to weigh these factors in relation to mortality figures as well as to medical and nursing care received and to the availability of hospital facilities.

The overwhelming central fact established by the national health survey is this: that with poverty goes not only a higher rate of sickness but a deficiency of medical care. These correlations were proved not only for the relief group but for struggling families above the level of relief. Many may have considered these facts too obvious to require proof, and certainly they had been supported by innumerable smaller studies. But never before had such a mountain of evidence been assembled to sustain the conclusion that among the poor there is an excess of sickness and death which requires preventive services and medical care proportionately greater than are required in the higher income groups. And never before had it been so convincingly shown that in many areas and localities those economic groups which are most in need of preventive services and medical care are receiving far less of both than are families with larger individual financial resources.

The national health survey irresistibly drew the attention of the interdepartmental committee to the national problems of health and medical care. The Technical Committee on Medical Care was directed to study the results of the national health survey and to correlate with them all other available data on the subject. After more than a year of work the Technical Committee produced a report on "The Need for a National Health Program," which was transmitted to the President last February. Already a part of this report, in which the health needs of the country are stated comprehensively, yet concisely, has been made public; with facts and conditions such as it sets forth you have long been familiar, through the years of generously contributing your skill and services to the destitute and broken men, women and children who have turned to you for aid in illness and suffering. It is to be hoped we may have graphically given to us by your own survey the full extent of the free services of the medical profession. It would be a good thing for every citizen to realize more clearly the immensity of the philanthropic burden which the members of the medical profession voluntarily assume.

We have the information as to health and medical needs in broad national terms. Your survey should be of great value in amplifying existing data regarding many specific localities and in presenting needs as they are seen in the field by practicing physicians. In this, as in all other fields, it is necessary always to keep in mind the difference between active demand and actual need. Our present picture of the total need may be amplified or modified in detail as further special studies are made. But the report of the Technical Committee on Medical Care, based on all available data—including direct contacts with large numbers of individual citizens as well as with professional groups and agencies—establishes conclusively the existence of grave and far-reaching needs.

Together with you, those of us who have been battling on the economic front against unemployment, starvation wages, indecent housing and utterly inadequate food find nothing new, but only shocking confirmation of the extent to which human and economic waste has been permitted to go on, when we read from the Technical Committee's report on The Need for a National Health Program such facts as the following: On an average day of the year, there are four million or more persons disabled by illness. Every year seventy million sick persons lose over one billion days from work or customary activities. In 1936, nearly a quarter of a million women did not have the advantage of a physician's care at delivery; 15,000 of these were delivered by neighbors or relatives; 223,000 were delivered by midwives, most of whom are untrained and ignorant.

In 1937, of forty-nine state health officers responding to a questionnaire, only two reported the facilities for maternal care in their states as adequate. In large areas and groups of the population the death rates between the second and the twelfth month of infancy are as high as they were for the whole country twenty years ago. Community measures for the control of communicable disease, so necessary in checking the acute infectious diseases of childhood, are inadequate in the greater proportion of rural counties throughout the country.

Each year, 40,000 young adults between the ages of 15 and 45 die from the ravages of tuberculosis. The deaths among these young adults represent about three fifths of all deaths from this cause.

Preliminary results from the national health survey indicate that disabling illness in the relief population occurred in 1935 at an annual rate 47 per cent higher for acute illness and 87 per cent higher for chronic illness than the corresponding rates for families with incomes of $3,000 and over. The annual days of disability per capita in the relief group were found to be three times as great as among upper income families; the nonrelief population with an income under $1,000 showed a rate of disability over twice that of the highest income group. One in every twenty family heads in the relief population was unable to work because of chronic disability, as contrasted with only one in 250 heads of families with incomes of $3,000 and over. Children of relief families experienced 30 per cent greater loss of time from school and usual activities because of illness than did children in families in moderate and comfortable circumstances. Only 70 per cent of the cases of disabling illness among relief persons received medical attendance exclusive of hospital care, compared with a figure of 83 per cent for those with a family income of $3,000 and over. The average medical services per case of disabling illness were about 50 per cent higher in the highest income group than among persons on relief. Bedside nursing care in the home was given to less than 1 per cent of the disabling illnesses among persons on relief; the proportion so attended in the group with family income of $3,000 and over was 10 per cent.

These are only a few examples—plucked more or less at random—from the data which we have about the low income

groups of our people. We must keep constantly in mind the fact that approximately fifty million of our population are in families with an annual income of less than $1,000 a year.

When facts of denial and destruction of human values, such as these I have mentioned, are discussed in terms of the size of the population involved—the tens of millions of men, women and children who are their victims—the problem of providing adequate health and medical services obviously demands concerted public action for its satisfactory solution.

In calling the National Health Conference, the Interdepartmental Committee is carrying out the suggestion of the President that it invite representatives of the interested public and of the medical and other professions to examine the health problems in all their major aspects and to discuss ways and means of dealing with these problems.

The National Health Conference is planned as a working conference. To provide the best opportunity for frank discussion, it is necessary to limit the number of participants, but the Interdepartmental Committee hopes that they will be truly representative of both the professional groups, who have the technical knowledge, and of the general public, which is vitally interested in the distribution and application of this knowledge.

It is hoped that the conference will contribute to two ends: First, a better understanding of national needs in the field of health and medical care. Second, the formulation of policies which will enable the medical and other professions, private organizations, federal, state and local agencies, and individual citizens, to cooperate in efforts to meet these needs.

The Technical Committee on Medical Care will submit to this conference not only its analysis of needs but certain tentative recommendations as to means of meeting them. These recommendations have been submitted to the President, and it is at his suggestion that they will be submitted to the consideration of the National Health Conference. The report deals with several broad problems: First, the need for more comprehensive public health services to combat specific diseases or groups of diseases, such as tuberculosis, the venereal diseases, pneumonia, malaria, cancer and other chronic diseases of middle and old age, mental disease and deficiency, and industrial hazards.

Secondly, the need for expansion of maternal and child health services; the Technical Committee estimates that half the infant deaths and half the maternal deaths could be prevented by the application of the knowledge and skill which your profession now has.

Thirdly, the shortage or unequal geographic distribution of hospitals, clinics, doctors, dentists, nurses and other agencies and trained experts in the field of health and medical care.

Fourthly, means of providing more adequate medical care for recipients of public assistance and other persons of very low income.

Finally, methods of financing the sickness costs of self-supporting persons of limited means.

We do not intend to ask the National Health Conference to take formal action on any part of this report. We hope that none of the groups or individuals participating in the conference will attempt to make premature judgments or urge others to do so. Our purpose is to obtain the frankest discussion of ways and means of dealing with these immense and complex problems. We hope that the participants in the conference and, subsequently, other groups and individuals throughout the country, will give us the full benefit of their knowledge, experiences and ideas.

No one formula or program can possibly be found adequate to meet the varied needs, but a composite of many efforts and plans, some already tested, some in experimental stages, some not yet under way, can and must be found. We believe that, by providing an opportunity for an interchange of views between representatives of the medical and other professions, of various agencies and of the general public, the National Health Conference will dissipate misunderstandings and work toward a meeting of minds on the beginning of a coordinated national health program.

That there will be concerted public action eventually for such a program no one measuring the human needs and denials can doubt. In this great democracy with its unsurpassed resources and potentialities for human progress, one third of our people are not going indefinitely to remain ill fed, ill housed, ill cared for in sickness. Already they are on the march, and the only question which remains is whether highly specialized groups, experienced and trained in ways and means of meeting human needs, are going courageously and quickly to offer all they can give in constructive and progressive leadership and help in the meeting of the vast human problems of today.

You have your instruments of precision for diagnosis and treatment; your technics for prevention and cure are among the wonders of the modern world. How can we help to bring them to all our people who need them? That is the question which we submit to you today, the question we shall ask at our conference, must go on asking until we find the answer.

Report of Advisory Committee on Supply of Medical Care

Dr. W. F. Braasch, Chairman, presented the following report of the Advisory Committee on Supply of Medical Care, which was adopted on motion of Dr. Braasch, seconded by Dr. George W. Kosmak, New York, and carried:

Widely publicized statements have been made by so-called leaders of medical science, social reformers and welfare politicians to the effect that the need for medical reform was urgent and that immediate radical changes were essential in order to give adequate medical care to countless hundreds who were now being neglected. Estimates of widespread inadequacy of medical care, rated as high as 50 per cent in the indigent groups, made some of us gasp. These claims have gone practically unchallenged except by the organized profession and are still being widely quoted and accepted by press and public. Information concerning the distribution of medical service which has been quietly accumulated in recent years at the headquarters of the American Medical Association was quite contrary to statements emanating from sociologic and welfare groups and from surveys inspired by governmental agencies. The desirability of more accurate data became very evident and, when voiced by the American Public Health Association, the trustees and officers of the American Medical Association lost no time in starting a nationwide survey of the actual supply of medical care. In contrast to previous health surveys made by laymen untrained and ignorant of the intricacies involved, this survey was to be made by the doctor himself.

After thorough preliminary study by the Bureau of Medical Economics and the officers of the Association, it was decided to use the county medical society as the basic unit of the survey. It was not a case of "passing the buck" as was claimed, but it is the only way in which the medical conditions existing in different sections of the country could be determined. It was also decided to include every phase of activity related to medical service, so as to make the survey as complete as possible. For this purpose forms were compiled which, when filled out, should give an exhaustive survey of the entire medical field. Authoritative data concerning the need and supply of medical care will at last be available and we shall now be able to discuss intelligently any inadequacy which may exist.

It is evident that this survey will furnish us not only a great variety of valuable data related to medical care but many by-products of importance as well. We should be able to determine, for example, the following data concerning any deficiency in supply of medical service: its geographic distribution; the type of community, and the social status of the patient involved. We should also discover why these conditions exist, whether public officials or institutions are derelict, and in what respect. It would be most disappointing if from the great mass of data accumulated no suggestions developed to improve the present distribution of medical service. Not the least important will be the effect of the survey on public opinion and incidentally the sympathetic reaction on the part of laymen who have participated in the accumulation of data. Finally, and possibly of greatest importance, this survey should draw the component parts of our Association into closer relationship with activities centered in the Association headquarters.

Every effort has been made by the officers of your Association to publicize and arouse interest in the survey by means of articles in the Organization Section of THE JOURNAL, printed information sent to state organizations for distribution, and by individual efforts of the officers and members of the Board of Trustees. Dr. R. G. Leland, Director of the Bureau of Medical Economics, has responded to the requests of numerous state and county societies and in recent months has devoted much time and energy to giving personal aid to its expedition.

An advisory committee was appointed by the Board of Trustees, composed of men from various parts of the country who have been interested in economic affairs. At our initial meeting many of the problems involved were discussed. The members of the committee were unanimous in recognizing the importance of the survey and urged that it be carried out as thoroughly as possible. As might be expected, opinions as to the method of conducting the survey in the various parts of the country were quite different. It was felt that instructions in conducting the survey and in filling out the different forms should not be too didactic. It seemed desirable to let the various sections of the country devise their own methods of procedure. Each member of the Advisory Committee agreed to take an active part in the survey of his own state and also, so far as possible, to lend his efforts in an advisory capacity to the activities in the adjacent states. It was felt that this great attempt to make an inventory of national medical supply should by no means be final and that in some of its phases these efforts should be continuous.

What progress has been made so far? Although the survey has been carried on with enthusiasm in some states, we regret to say that the response in some parts of the country has been lukewarm and in several states very disappointing. There are scattered reports of open hostility and back-sniping on the part of individual members, insinuations that the survey will be worthless and will lay us open to criticism. The latter can happen only if we do not take the survey seriously and cooperate in every way possible.

It has been observed that those states were most successful which had first established a good, working, preliminary organization. The exact form of the organization varied in the different states. In most cases the activities were centralized in the office of the secretary of the state association. In several states general supervision was left to the committee on medical economics, and detailed supervision in the various counties or districts of the state was subdivided among the members of the council or the board of trustees representing these districts. In most counties the details of the survey were in charge of a special committee appointed for this purpose. Contact was made with the county secretaries either by means of bulletins, notices in state medical journals, or personal visits from members of the economics committee, the council or the state secretary. The survey went over best in counties in which a preliminary informatory gathering had preceded distribution of the blanks. Meetings were held in the larger communities of the county, in which a representative group was given personal instruction by officials of the state organization or by the county secretary. In some states statewide and district meetings of county representatives were held and at the gatherings state and national officers, including Dr. Leland himself, gave individual advice. Field work to facilitate the survey throughout the state was carried on by the secretary or other officer of the state association in some areas. In others it was done in conjunction with the chairmen and members of the economics committee or of the council. In one state a group of senior medical students was employed to facilitate the survey.

In order to demonstrate the different methods of organization and the means employed in various states, we suggested that the Bureau of Medical Economics prepare an exhibit in the American Medical Association section of exhibits. We trust that many officers of county and state societies, as well as members of the Association, will avail themselves of this opportunity to profit from experience already had. In addition, the members of the Advisory Committee will be available during the meeting in order to discuss problems in the conduct of the survey which may have appeared in any state or county organization.

The cost of conducting the survey varies widely in different localities. It has been found necessary to devote comparatively little money to it in most of the state associations, averaging only a few hundred dollars. The cost of the survey in the larger communities has been borne by the local county societies, with the assistance of the state medical societies in some instances, and has caused no excessive burden. The expense involved in accumulating and evaluating the various data assembled in the Association headquarters will not be excessive and has already been taken care of by the Board of Trustees. The total expenditure entailed should not be a serious problem and promises to be insignificant in comparison with the value received.

With regard to the various forms, as might be expected, form 1, which deals directly with the physician himself, is criticized most. Confusion arose in the minds of some as to how to answer questions 1, 2 and 3 of this form. Since many physicians did not keep a close record of indigent patients, it was difficult to give an exact answer to these questions. However, it was held by Dr. Leland and others that an approximate estimate of the number of patients treated would suffice. In some places physicians are keeping records for a month or more to get dependable estimates.

It is generally recognized that no large survey can be 100 per cent accurate. Even life insurance companies are unable to make an exact survey. The most we can expect to get will be a pattern or sampling of the medical situation in each county and state. Although it is important that the sampling should be as accurate as possible, it is of equal importance that every physician should do the best he can in filling out the blanks.

In order to increase the accuracy of data from several questions in form 1, it was thought advisable to make a separate spot survey over short periods of time. Accordingly, the Bureau of Economics is sending out record forms to cover these different periods, in July, October and January. These blanks, form 1 F, will permit the keeping of an accurate record of patients during those periods.

The importance of answering questions 7 and 9 in form 1 cannot be overemphasized. In fact, the actual value of form 1 would be comparatively little unless these questions were fully considered. We are particularly interested in knowing what the physician's reaction is toward the problems of medical care and what remedies he can suggest for their improvement under the present circumstances.

In large and highly industrialized communities, considerable difficulty arose in filling out form 8. In order to facilitate and simplify the gathering of information, special blanks were prepared by the survey committee in Pennsylvania and in other states. The Bureau of Medical Economics has repeatedly advised the use of additional questions or forms when necessary to acquire a complete understanding of the problem of medical demand and supply. We understand that the blanks sent out to the various institutions and social agencies have been filled out much more promptly and completely than those sent to the physicians themselves. It would be most unfortunate for the success of the survey if this discrepancy should continue.

It cannot be made too emphatic that this is primarily a survey of the practitioners of this country. We are interested in finding out the direct results of their observations and their conclusions as to the supply of medical service. We are not interested so much in the theoretic reforms of many of the so-called leaders of medicine, which in most cases are products of the noble thought and the library table. It is not of great importance to find out what those who are engaged in teaching or cloistered specialists and institutional doctors think about medical care, and we already know what governmental officials and social workers think. The facts of the situation must come from those who are in direct contact with the actual practice of medicine. We must find out from them to what extent reform in medical care is needed and get their opinions as to how it can best be accomplished.

If there ever can be a mandate from the American Medical Association to its members, this survey should be so considered. Now that we are definitely committed to the survey, it is up to us to make good; if we do not, the situation will be most disastrous.

The best advice the advisory committee can give is that each member of the House of Delegates shall individually take on himself the responsibility of the success of the survey in the district that he represents. If you find that the survey is lagging in your district, get after the officers of the backward state or county society and convince them of the great importance of its completion. See to it that effective organization is established at once. Ask the member of the advisory committee or the Board of Trustees in your part of the country, ask Dr. Leland and the officers of the American Medical Association, for their active cooperation, and it will be forthcoming. How many of the members of this House have filled out form 1? If you have not, you should do so immediately. Every one of you should see to it that your county society sends in a return as complete and as quickly as possible.

Gentlemen, this is your survey, not that of any bureau, committee or officer of the Association. It is squarely up to you and your constituents to carry it through successfully. It is no exaggeration to state that this survey may have a profound influence on the future course of American medicine.

Report of Reference Committee on Sections and Section Work

Dr. Robert A. Peers, Chairman, presented the following report, which was adopted on motion of Dr. Peers, seconded by Dr. John Z. Brown Sr., Utah, and carried:

Your Reference Committee on Sections and Section Work has reviewed the program and heartily commends the many practical, authoritative and up-to-date presentations, which cover a wide variety of subjects. It comments especially on the inclusion of some of the diseases peculiar to the Orient, which are of increasing importance because of the rapid methods of travel. This transmission of disease is a medical problem which the members of the Council on Scientific Assembly and the section officers anticipated and, by their foresight, made the members of the Association conscious of these new dangers.

The subjects presented, covering as they do new drugs, recent operations, modern therapeutic measures, glandular therapy, allergic reactions, blood dyscrasias and the excellent symposiums on cancer, syphilis and radiology, emphasize many of the advances made in the past year in clinical medicine.

The report of the Council on Scientific Assembly has been reviewed and your reference committee particularly commends the suggestion of the Council that scientific sections of the Association may combine their sessions when the subjects presented are of mutual interest. To further the attendance at the general scientific meetings and sectional programs, your reference committee would be happy to endorse any activity of the Council on Scientific Assembly that would discourage independent societies from holding their meetings during the sessions of the American Medical Association.

The scientific exhibits maintain the high standards set in previous years and continue to offer to the alert physician the finest and most comprehensive postgraduate instruction obtainable. The individual exhibits are worthy of praise and the subsidized research projects, such as those on fractures and anesthesia, continue to attract a great number of our members. Your committee recommends that these subsidized exhibits of fractures seek the cooperation of other sectional interests. The experimental problems in medicine and surgery as presented in the Scientific Exhibit should have special commendation.

Your reference committee records its appreciation of the work done by this very active Council on Scientific Assembly, the section officers and those officially concerned with the Scientific Exhibit.

Respectfully submitted.

ROBERT A. PEERS, Chairman.
ARTHUR J. BEDELL.
BURT R. SHURLY.
E. H. SKINNER.
TOM B. THROCKMORTON.

Report of Reference Committee on Medical Education

Dr. William D. Johnson, Chairman, presented the following report, which was adopted on motion of Dr. Johnson, seconded by Dr. J. Newton Hunsberger, Pennsylvania, and carried after discussion:

Your reference committee, having studied the Resolution Approving in Principle the Indiana Plan of Health Education and Preventive Medicine, offered by Dr. H. G. Hamer at the morning session, commends the resolution and moves its adoption.

Respectfully submitted.

WILLIAM D. JOHNSON, Chairman.

Report of Reference Committee on Executive Session

Dr. J. D. Brook, Chairman, presented the following amended report of the Reference Committee on Executive Session and stated that credit for the preparation of that part of the report referring to the address prepared by Miss Roche was due Dr. W. F. Braasch, Minnesota:

1. The resolution concerning the movie film entitled "The Birth of a Baby" presented by Charles W. Roberts, Georgia, suggests three points: (*a*) its educational value; (*b*) age limit for showing, and (*c*) the policy of the House of Delegates on the showing of the film.

To the first question your committee replies by saying that it believes that the film has a definite educational value and that maternal and child welfare endeavors would be enhanced by its release.

To the second question your committee replies by recommending that, as children would obviously fail to comprehend the import of the film, its showing be limited to adults.

In reply to the third question concerning the policy of this House, your committee submits the following: Because the original contract with the producers was such that the film should not be shown except by consent of the county medical society and because of our inalienable belief in "states' rights," your committee labels the question of showing the film a problem of the various state societies and their component county organizations and recommends that it be so handled.

2. Contraception and Venereal Disease Prophylactics: In the report of the Board of Trustees on page 97 of the Handbook appears a statement of fact regarding the passage of laws by four states controlling to some degree the sale or distribution of appliances, drugs and medicinal preparations intended or having special utility for the prevention of conception and venereal diseases. We believe the enactment of these laws is a step in the right direction, as it limits the sale and distribution of contraceptive materials to responsible persons; namely, the physician and the pharmacist.

On pages 142 and 143 of the Handbook is found the Report of the Committee to Study Contraceptive Practices and Related Problems as presented to the Board of Trustees. The committee asks the acceptance of the following statement by the House of Delegates:

> It is not the function of the American Medical Association to tell physicians what therapeutic advice they shall offer patients. However, it has been its policy to investigate various procedures, devices and drugs, and to publish the results of such studies in its official publications for the information of the profession.
>
> The instructions to the Council on Pharmacy and Chemistry and the Council on Physical Therapy to investigate further the materials, devices and procedures used for the purpose of contraception do not indicate any change in the usual policy of the Association, nor do they constitute an endorsement by the Association of contraceptive practices.

While there are still some phases of the subject which have not been clarified, particularly as to methods and devices used for contraceptives, your committee endorses the committee's statement and desires to reiterate the stand taken by this house in 1937 that the problem is essentially a medical proposition.

3. Address prepared by Miss Josephine Roche: Your committee believes that it expresses the sentiment of the House of Delegates in saying that it is glad to have received a communication from the chairman of the Interdepartmental Committee, Miss Josephine Roche. It is particularly welcome since it is the first official communication that the American Medical

Association has received from this important governmental committee.

Your committee notes with interest that the studies have resulted in the coordination of health activities involved in the Public Health Service, in the Department of Labor and in the Children's Bureau. It trusts that future results will bear out the promise of increased efficiency.

Possibly the most interesting data quoted are those which would indicate a much higher rate of sickness in the subeconomic groups. This raises the question whether the economic factor involved is not of greater importance than is the lack of medical care in the cause of illness.

The address contains many interesting statements regarding medical care, some of which are at variance with data accumulated in the files of the Bureau of Medical Economics.

Although your committee agrees in principle with many of the objectives which the Interdepartmental Committee has in view, nevertheless there may be some danger involved in their execution. Your committee has in mind, for example, the devotion of huge sums of money to the care of certain specified diseases. Experience has already shown that such action may produce a lack of balance in the entire program for medical care which can retard rather than expedite progress.

Your committee emphatically agrees with the statement in the address which reads as follows: "No one formula or program can possibly be found adequate to meet the varied needs of medical care."

Your committee notes with satisfaction that a group of physicians has been invited to take part in the discussions of the forthcoming national health conference and that it includes officers and leaders of the American Medical Association. This will make available a vast amount of information concerning the subjects involved which has been accumulated by the American Medical Association over a period of years, including the results of our national survey of medical service. Your committee is confident that the official representatives will be guided by the principles and opinions which have been repeatedly expressed by the House of Delegates.

Respectfully submitted.

J. D. BROOK, Chairman.
W. F. BRAASCH.
WILLIAM R. BROOKSHER.
DON F. CAMERON.
MEREDITH MALLORY.

On motions of Dr. Brook, duly seconded and carried after discussion, the report of the Reference Committee on Executive Session was adopted as amended section by section and as a whole.

Report of Board of Trustees

Dr. Arthur W. Booth, Chairman, Board of Trustees, stated that the Deputy Commissioner of Internal Revenue had recently reversed the decision of a previous commissioner and held that the American Medical Association is not a scientific or educational corporation within the meaning of section 101 of the Revenue Act of 1936 and corresponding sections of prior revenue acts, but rather a business league and, therefore, not exempt from tax under the Social Security Act.

On receipt of that decision the Board of Trustees instructed the Secretary and General Manager to collect a tax from the employees, to make payments and, in the meantime, to take the matter up with a competent tax counsel. This was done and an opinion has been secured from the tax counsel. The Board yesterday voted to ask the Bureau of Internal Revenue for reconsideration. The recent decision of the Commissioner of Internal Revenue will involve large expenditures for the current year. No opportunity has been given the Association to provide the money for this tax. The Board is therefore in the position of having to find $55,000 and possibly $100,000 for the current year alone.

The Speaker announced that this report was read for the information of the House.

Dr. Austin A. Hayden, Secretary, Board of Trustees, made an announcement concerning the Opening General Meeting, after which the Speaker declared that the House would recess until 1 p. m. Thursday, June 16.

The House recessed at 4:30 p. m. to reconvene on Thursday, June 16, at 1 p. m.

Third Meeting—Thursday Afternoon, June 16

The House of Delegates was called to order at 1:15 p. m. by the Speaker, Dr. N. B. Van Etten.

Report of Reference Committee on Credentials

Dr. Deering G. Smith, Chairman, reported that there was a total registration of 170, which was only four below the possible number that could be registered.

Roll Call

The Secretary called the roll and announced that more than a quorum had responded.

Presentation of the Minutes

It was moved by Dr. Arthur C. Morgan, Pennsylvania, seconded by Dr. H. B. Everett, Tennessee, and carried, that the House dispense with the reading of the minutes.

Address of Dr. Carl H. Vrooman

The Speaker presented Dr. Carl H. Vrooman, Vancouver, B. C., Canada, delegate from the Canadian Medical Association, who addressed the House as follows:

Mr. Speaker, Members of the House of Delegates of the American Medical Association:

In presenting the greetings of the Canadian Medical Association to the members of the American Medical Association I wish to express the great pleasure it gives a Canadian to be present at these meetings or to welcome members of the American Medical Association at our own meetings.

I have been particularly impressed in listening to your proceedings by the similarity of our problems and the democratic methods used in solving them. Socialization of medicine looms large in your discussions and has the same lively interest with us, particularly so in my own province of British Columbia, as some of you may know. You have no monopoly on diversity of opinion in the maze of plans, legislative and otherwise, that are proposed for the care of the sick. It is a pleasure to hear your leaders emphasize that the care of the sick is the business of the physician. Ours are not the mild concerns of life, but we are entrusted by the people with their most valuable asset; namely, health. Sometimes I think we doubt that this trust imposed on us as individuals is transferred to the democratic organizations representing us whose duty it is to solve these medicosocial problems.

Our experience in Canada and particularly in British Columbia has been that the people trust organizations such as yours, or organized medicine, more than we sometimes think, and that the ill considered and amateurish solutions so often loudly presented do not carry the weight they seem to with the general public. People in your country and mine still trust democratic government and as long as your association and ours continue to be the democratic forum of the medical profession that trust will continue.

I have to read the official letter of Dr. Routley conveying the official greetings. This is to the President, Officers and Members of the American Medical Association.

Dr. Vrooman read the following letter of greetings from the Canadian Medical Association:

The Canadian Medical Association desires to take this opportunity of presenting, through its official fraternal delegate, Dr. C. H. Vrooman of Vancouver, most cordial good wishes for the success of the annual meeting of the American Medical Association being held in the city of San Francisco.

The Canadian Medical Association is deeply sensible of the spirit of good will which prevails in each association toward the other. You have always extended the hand of fellowship to members of the Canadian Medical Association who have been privileged to attend your meetings. We, in turn, would like to think that Fellows of the American Medical Association are conscious of the fact that they are always welcome guests on Canadian soil and at meetings of the Canadian Medical Association.

On behalf of the President, Officers and Members of the Canadian Medical Association, I beg to remain,

Fraternally yours,
T. C. ROUTLEY, M.D.,
General Secretary.

Report of Judicial Council

Dr. George Edward Follansbee, Chairman, presented the following report of the Judicial Council acting as a reference committee, which was adopted on motion of Dr. A. T. McCormack, Kentucky, seconded by Dr. G. Henry Mundt, Illinois, and carried:

Your committee has in several meetings given prolonged consideration to the Resolution on Teaching in Schools of Chiropody introduced by Dr. G. Henry Mundt, Illinois. The sponsor of the resolution and several of the delegates have appeared before the committee; arguments both pro and con have been heard. The more the matter has been studied, the more complicated it becomes. The committee, being the Judicial Council, is unwilling to make recommendation to this House unless it feels assured that its recommendation is correct and sound. Further information and further investigation, more than can be accomplished in the limited time available at this session of the House, is needed. The resolution does not pertain to an acute situation.

For these reasons your committee recommends that the resolution be laid on the table, with the expectation that, if a like resolution is presented at the next annual session of the House, the Judicial Council will be prepared to give recommendation based on adequate knowledge and sound judgment, if so requested and if a similar resolution is introduced.

GEORGE EDWARD FOLLANSBEE, Chairman.
JOHN H. O'SHEA.
WALTER F. DONALDSON.
JOHN W. BURNS.
E. R. CUNNIFFE.

Resolution on Visual Standards for Operating Motor Vehicles, from the Section on Ophthalmology

Dr. Arthur J. Bedell, Section on Ophthalmology, presented the following resolution, which was adopted on motion of Dr. Bedell, seconded by Dr. Charles H. Goodrich, New York, and carried after discussion:

WHEREAS, For many years state licensing boards have asked for official visual standards for operating motor vehicles; and

WHEREAS, A committee of the Section on Ophthalmology of the American Medical Association has had this problem under serious consideration for many years and has made its report; and

WHEREAS, This report was accepted by the Section on Ophthalmology of this Association; and

WHEREAS, The delegate of the section was directed to present this report to the House of Delegates; be it

Resolved, That the following be accepted as the approved American Medical Association standards:

A. For an Unlimited License:
1. Visual acuity with or without glasses of 20/40 Sn. in one eye and 20/100 Sn. in the other.
2. A form field of not less than 45 degrees in all meridians from the point of fixation.
3. The presence of binocular single vision.
4. Ability to distinguish red, green and yellow.
5. Night blindness not to be present.
6. Glasses when required be worn while driving and those employed in public transportation be provided with an extra pair.

B. Visual Standards for Limited License:
1. Visual acuity of not less than 20/65 Sn. in the better eye.
2. Field vision of not less than 60 degrees horizontally and 50 degrees vertically from point of fixation in one eye.
3. Diplopia not to be present.
4. Glasses to be worn when prescribed.
5. Coordination of eye, mind and muscle to be fully adequate to meet the practical visual road tests.
6. A limited license not to be issued to those employed in public transportation.

C. Renewals, Retesting and Reexaminations:
1. Renewals of license to be issued at least every third year. The applicant shall with each renewal make a declaration that he knows of no visual defect which has developed during the past year.
2. Retesting of acuity to be made at least every six years.
3. If any visual defects have developed, an examination by an ophthalmologist and the report thereof, to be required before reissuing the license.
4. License to state thereon the specific limitation for driving.

Resolutions from the Section on Nervous and Mental Diseases Recommending Alteration of Existing Laws Relative to Contraceptive Information

Dr. Tom B. Throckmorton, Section on Nervous and Mental Diseases, presented the following resolutions, presented to the Section on Nervous and Mental Diseases by Dr. Foster Kennedy, New York, which were referred to the Board of Trustees on motion of Dr. Throckmorton, seconded by Dr. Arthur C. Morgan, Pennsylvania, and carried:

WHEREAS, State and federal legislation governing the control of reproduction is conflicting and renders certain phases of medical practice illegal, it is important that the profession of medicine as a whole should clarify and lead in these questions involving medical practice and procedures. The importance of such control in medical practice where such control constitutes a therapeutic measure is obvious to enlightened lay opinion throughout the civilized world and should be obvious to all medical men not medievally minded; therefore be it

Resolved, That we hereby recommend the alteration of existing laws wherever necessary, so that physicians may legally give contraceptive information to their patients; and be it further

Resolved, That we recommend an amendment to sections 211, 245, 311 and 312 of the Federal Penal Code as follows: "Standard medical and scientific journals and reprints therefrom and standard medical works which contain information regarding the prevention of conception are *not* nonmailable under this section"; and be it further

Resolved, That a full and frank discussion be given in regard to these subjects by the proper deliberative council of the American Medical Association.

Report of Reference Committee on Legislation and Public Relations

Dr. Terry M. Townsend, Chairman, presented the following report:

Report of Bureau of Legal Medicine and Legislation and Resolution on Recognition of Acting Assistant Surgeons of the Spanish-American War: A survey of the report of the Bureau of Legal Medicine and Legislation discloses the vast amount of work done. It recites legislation proposed by gentlemen who are not fully familiar with the economics of medicine and their effect on the public. It narrates the large subsidies proposed for federal health activities in the prevention and treatment of cancer, venereal diseases, tuberculosis, infantile paralysis, blindness, deafness, silicosis, medical care for transients, and hospitals for the medically needy. Much of this legislation died in committee or failed to pass.

During the Spanish-American War many physicians volunteered their services in the capacity of Contract or Acting Assistant Surgeons. They rendered the same service, tolerated the same living conditions and took the same risks as commissioned medical officers, but they could not be given commissions as the then existing laws made no provision for such commissions. It is only the lack of these commissions that now stands between these physicians and their old age service pensions. Nurses who served in the same status in the same war have long since received their pensions. The same thought is embodied in the resolutions introduced by Dr. Elbridge J. Best, California. Your reference committee endorses these resolutions and recommends that this House of Delegates commit itself to continue support of legislation to provide pensions for Contract and Acting Assistant Surgeons who served in the Spanish-American War, the Philippine Insurrection and the Boxer Uprising.

Among the several bills introduced in Congress proposing reorganization of the executive branch of the federal government, all propose the establishment of a Department of Welfare and none suggest the creation of a Department of Health. Since the health of the people is of such importance to the government, your committee recommends that this House of Delegates reiterate its demand for a federal executive department to be designated as the Department of Health, with a Doctor of Medicine at its head who shall have general supervision and direction of the affairs of the federal government pertaining to the health of the people.

Workmen's compensation legislation is expanding its scope to provide compensation for disability resulting from any occupational disease arising out of and in the course of employ-

ment. To safeguard the injured workman, the carrier and the physician, there should be medical membership on each compensation commission or industrial board. Only competent doctors of medicine can evaluate and determine the worth of medical evidence, which constitutes the crux of each decision on each claim presented to the commission or board. Your committee recommends that the constituent state medical associations be advised to take such action as may be necessary to procure medical memberships on compensation commissions and industrial boards.

Your committee congratulates and compliments the Medical Society of the District of Columbia on its successful efforts in preventing prohibitive legislation on animal experimentation.

Report of Bureau of Medical Economics: That portion of the report of the Board of Trustees devoted to the Bureau of Medical Economics deserves your commendation. Especially does your committee recommend your commendation of the statements pertaining to the study of medical care, group hospitalization and the expansion of hospital functions into the field of medical practice. The developments in these fields are, in the opinion of your committee, clearly and fairly set forth. Your committee recommends that the Association's activities in these fields be in the same careful manner that has characterized its work up to the present time.

Your reference committee has studied carefully the objectives of the study of medical care called for in the resolutions passed by the Board of Trustees in December 1937. This project is but a furtherance and extension of the encouragement which the American Medical Association has previously given to state and county medical societies to develop means by which all persons might readily obtain medical care at fees commensurate with their ability to pay; it is consistent with the repeatedly expressed position of this Association that the medical and preventive medical services and facilities can be supplied satisfactorily and efficiently only when the needs are known and then the procedures for supplying these needs must vary according to local conditions.

Your committee is unanimously of the opinion that state and county medical societies cannot afford not to develop for their respective jurisdictions the most accurate and complete information that will enable them, with the assistance of the correlated professions and other agencies concerned with medical and preventive medical services and facilities, to maintain continuously medical care that is sufficient in amount and satisfactory in quality.

Since it is contemplated in the resolutions passed by the Board of Trustees that some state and county medical societies may find it necessary to develop preferable procedures for supplying the needs where medical services are insufficient or unavailable, it is urged that these medical societies be guided in the development of these procedures by the ten principles adopted by the House of Delegates in 1934. The application of these ten principles to specific suggestions or proposals for the organization of medical services may be facilitated by utilizing the method of direct cash payments to individual members. Your committee unanimously concurs in the suggestion and recommends that the American Medical Association adopt the principle that in any place or arrangement for the provision of medical services the benefits shall be paid in cash directly to the individual member. Thus, the direct control of medical services may be avoided. Cash benefits only will not disturb or alter the relations of patients, physicians and hospitals.

Your committee has considered in detail that portion of the report of the Board of Trustees devoted to the Bureau of Medical Economics under the heading "Group Hospitalization" and also the separate statement of the Bureau of Medical Economics entitled "Group Hospitalization Insurance." Your committee commends the clarity and forcefulness of these statements and recommends that the ten principles adopted in 1937 as the policy of the American Medical Association be amplified by the addition of the following statement to Principle 4:

If for any reason it is found desirable or necessary to include special medical services such as anesthesia, radiology, pathology or medical services provided by outpatient departments, these services may be included only on the condition that specified cash payments be made by the hospitalization organization directly to the subscribers for the cost of the services.

Disapproval of the inclusion of special medical services on a service basis in hospitalization insurance contracts will then be explicit but a constructive alternative arrangement will be possible.

Report of Committee on Legislative Activities: The report of the Committee on Legislative Activities indicates the large amount of work done and the many hours spent in the interest of organized medicine. The last paragraph reiterates the advice to members of county societies to scale their charges for professional services in accordance with local economic conditions. Your committee commends the industry of the Committee on Legislative Activities.

Resolutions on Program of Public Relations: The resolutions submitted by Dr. Lyell C. Kinney, California, were considered in joint session with the Reference Committee on Amendments to the Constitution and By-Laws. The result of the joint consideration will be reported by the Chairman of the Reference Committee on Amendments to the Constitution and By-Laws.

Respectfully submitted.

TERRY M. TOWNSEND, Chairman.
W. ALBERT COOK.
CHARLES A. DUKES.
HENRY C. MACATEE.
WALTER B. MARTIN.

On motions of Dr. Townsend, duly seconded and carried, the report of the Reference Committee on Legislation and Public Relations was adopted section by section and as a whole.

Report of Reference Committee on Hygiene and Public Health

Dr. Charles H. Goodrich, New York, acting for Dr. H. B. Everett, Chairman, presented the following report:

Your reference committee recommends that the Resolutions on Controlled Animal Experimentation, which had been introduced by Dr. Elbridge J. Best, California, be adopted after being amended to read as follows, and that the Board of Trustees be requested to undertake such measures as will make them most effective:

WHEREAS, The knowledge, possessed by modern medicine and the remedial measures made available for the prevention, diagnosis and treatment of disease in human beings, live stock and other domestic animals has been made possible only by controlled, humane, scientific animal experimentation, controlled by medical men, research workers and laboratories; and

WHEREAS, Controlled animal experimentation has uncovered the causes of contamination or blighting of many foods (fruits, vegetables, milk) which makes them dangerous for human and animal consumption; and

WHEREAS, Continuous research, study and investigation of causes and prevention of many human diseases, animal infections and causes for food deterioration are dependent on a continuation of controlled animal experimentation in order that human health and lives, as well as live stock and foodstuffs, may be saved and financial losses be prevented; and

WHEREAS, There are many poorly informed individuals now active in an endeavor to enact legislation that would cripple legitimately and humanely controlled animal experimentation, so vitally necessary to those scientific men who are seeking the etiology and prevention of conditions that still cause human suffering, kill fowl, other bird life and animals and affect the raising of foodstuffs; and

WHEREAS, These individuals, commonly known as antivivisectionists, wilfully repudiate, ignore and misrepresent the proved facts that have been established by scientific research and study and persist in their efforts to mislead people in their endeavor to secure the enactment of laws prohibiting animal experimentation, which laws and prohibition would cause much human suffering, loss of lives and destruction of animals and foodstuffs and would also terminate the studies of scientists and laboratory research workers; therefore, be it

Resolved, By the American Medical Association: 1. That scientifically controlled animal experimentation is of supreme importance in the study and investigations seeking the cause and cure of factors and conditions that affect the health of and cause the death of human beings, animals, dogs, fowls, birds and live stock.

2. That any and all efforts to restrict or prohibit humanely controlled animal experimentation will cause untold suffering, loss of lives of human beings, animals and live stock and produce an incalculable financial loss to every community, industry and the commonwealth; and further be it

Resolved, That the American Medical Association condemns the efforts of all who endeavor to cripple scientific research by seeking to obtain the enactment of laws hampering or prohibiting the use of animals in research investigation; and further be it

Resolved, That the House of Delegates recommends that each unit of this Association be urged (1) to undertake immediately the education of the public on the need and value of competent animal experimentations and (2) to expose the unjustifiable and insupportable claims and allegations of those who seek to obtain laws that may hamper or prohibit the humane use of animals in research studies.

Respectfully submitted.

H. B. EVERETT, Chairman.
CHARLES H. GOODRICH.
J. F. HASSIG.
CHARLES S. SKAGGS.
JOSEPH F. SMITH.

On motion of Dr. Goodrich, seconded by Dr. Robert A. Peers, California, and carried after discussion, the report of the Reference Committee on Hygiene and Public Health was adopted.

Report of the Reference Committee on Miscellaneous Business

Dr. Fred Moore, Chairman, presented the following report:

1. Resolution Dealing with Alcoholic Intoxication: Your committee sees much merit in the request as expressed in this resolution and recommends that it be transmitted to the Board of Trustees with the recommendation that the American Medical Association initiate studies for determination of definite, legally acceptable, scientific, clinical and laboratory tests for alcoholic intoxication. It further recommends that a report of said studies be presented to the House of Delegates at its next annual session.

2. Resolutions on Services of Section Delegates: Your reference committee was fortunate in having some of the section delegates meet with it for consideration of this resolution.

This petition is based on the following facts: 1. The existence of numerous societies of specialists wholly independent of the American Medical Association. 2. Occurrence of discussions and procedures in those societies which sometimes indicate a lack of understanding of the policies and procedures of this House. 3. A desire by sponsors of this resolution to correct these misunderstandings and substitute intelligent cooperation therefor.

Your committee is in complete accord with the desirable objectives of these resolutions and offers the following recommendations:

(*a*) That this House request delegates from the several sections to act as liaison between the House and those special societies whose scientific interests are included in the respective scientific sections of the American Medical Association which the delegates represent.

(*b*) That the Secretary of this House shall each year communicate with presidents and secretaries of all such societies as his judgment may dictate, for the purpose of identifying section delegates and reaffirming to these societies the desire of the American Medical Association for sympathetic cooperation in coordinating all medical interests and activities.

(*c*) That the Secretary of this House shall after each annual session communicate with the delegates from each section advising them regarding the desire of the House in this respect.

Respectfully submitted.

FRED MOORE, Chairman.
E. S. HAMILTON.
WALT P. CONAWAY.
F. S. CROCKETT.
E. L. HENDERSON.

On motions of Dr. Moore, duly seconded and carried, the report of the Reference Committee on Miscellaneous Business was adopted section by section and as a whole after discussion.

Report of Reference Committee on Amendments to the Constitution and By-Laws and Reference Committee on Legislation and Public Relations as a Joint Committee

Dr. H. A. Luce, Chairman of the Joint Committee, presented the following report, which was adopted on motion of Dr. Luce, seconded by Dr. A. A. Ross, Texas, and carried:

Your joint committee wishes to state at the outset that in its opinion there exists within the House of Delegates, all officers of the society and the entire membership of the organization complete harmony as to purposes and objectives, said purposes and objectives being better trained and better qualified physicians to the end that the American people may still continue the recipients of the highest quality of service. Furthermore, any apparent lack of harmony in the ranks of organized medicine is not based on truth but is due to attempts to discredit that large group who from the time of Aesculapius has contributed so much to human life and happiness.

Your joint committee has given careful and prolonged consideration to the proposed amendments to the By-Laws, presented by the delegation from the state of Michigan, proposing the creation of a committee on public relations, and the cognate resolutions presented by Dr. Lyell C. Kinney, California, requesting the Board of Trustees to employ professional public relations counsel, the proposed amendments and resolutions having the object of establishing a closer relationship between the public and organized medicine.

Delegates from the states of California, Massachusetts and New York spoke in support of the resolutions, and a number of other delegates appeared to denote their interest. Your committee also received from Dr. Austin A. Hayden, Secretary of the Board of Trustees, from Dr. Olin West, Secretary, from Dr. Morris Fishbein, Editor of THE JOURNAL, from Dr. W. C. Woodward, Director of the Bureau of Legal Medicine and Legislation, from Dr. W. W. Bauer, Director of the Bureau of Health Education, and from Dr. R. G. Leland, Director of the Bureau of Medical Economics, detailed information concerning the contacts and channels through which the public is constantly reached through agencies already in existence and in active operation. The joint committee was impressed with the importance of avoiding any innovation which might disturb these arrangements, which have been built up through the years and depend on many subtle and delicate personal relationships.

Your joint committee also considered the implications of the costs involved, together with the tax liabilities that might arise from any radical change in the methods of publicity maintained by the Association.

The foregoing considerations have led your committee to return the proposed amendments and resolutions without its approval. However, the committee feels impelled by reason of the sentiment revealed by the presentation of these proposed amendments and resolutions and the support of them from so many diverse quarters, as well as by common knowledge of the frequent unsatisfactory attitude of the press, to ask the House of Delegates to impress on the Board of Trustees its feeling that careful consideration should be given to the operation of our agencies of public information so that, on the one hand, the necessary *fortiter in re* may be preserved and, on the other, that certain deficiencies of *suaviter in modo* may be corrected.

Respectfully submitted.

For the Committee on Amendments to the Constitution and By-Laws:

H. A. LUCE, Chairman.
HERBERT L. BRYANS.
GEORGE P. JOHNSTON.
CHARLES J. WHALEN.
RAYMOND L. ZECH.

For the Committee on Legislation and Public Relations:

TERRY M. TOWNSEND, Chairman.
W. ALBERT COOK.
CHARLES A. DUKES.
HENRY COOK MACATEE.
WALTER B. MARTIN.

Resolutions on Status and Future of Army Medical Library and Museum

Dr. Roger Brooke, United States Army, asked and received the unanimous consent of the House to introduce the following resolutions, which were adopted on motion of Dr. Brooke, seconded by several and carried:

WHEREAS, The Congress of the United States passed an act which was approved by the President June 15, 1938, authorizing the construction of a new building to house the Army Medical Library and Museum at Washington, D. C.; and

WHEREAS, The Army Medical Library, commonly called the Surgeon General's Library, is now housed in an old building totally inadequate for the purpose, thus limiting the use of this most extensive and valuable collection of medical books and literature and subjecting it to extreme fire hazards; and

WHEREAS, This library, established more than a hundred years ago, and the museum more than seventy-five years ago, by the Surgeon General of the Army, have operated most efficiently under the Army Medical Department since their establishment and should so continue to operate; be it

Resolved, That the House of Delegates of the American Medical Association express its high appreciation to the Congress and the President of the United States for the recent enactment of legislation authorizing the construction of a new building for the Army Medical Library and Museum; and further be it

Resolved, That the House of Delegates petition the Congress of the United States and the President to make available as soon as practicable funds for the construction of a new building for the Army Medical Library and Museum.

Address of Dr. Charles M. Greenslade

The Speaker presented Dr. Charles M. Greenslade, Dunedin, New Zealand, representative of the New Zealand Branch of the British Medical Association, who addressed the House as follows:

Mr. Speaker, Members of the House of Delegates of the American Medical Association:

Let me say that your welcome overcomes me. I come from a very small country. I represent the New Zealand branch of the British Medical Association and it is my privilege to accept your hospitality. We look more and more to the United States of America for advances in medicine and in surgery, and many of our men nowadays come to the United States to help themselves in the furtherance of their work. I deem it a great privilege to be here today and I thank you very much indeed for the way in which you have received me.

Remarks of Past President W. D. Haggard

Mr. Speaker, Gentlemen of the Association:

It is a very great pleasure to be with you here on this auspicious occasion. I am very happy that our colleague who speaks the mother tongue that we can almost understand is here in the capacity of our guest. We know of New Zealand and its contributions and the splendid membership it maintains in our profession. I am very happy to acknowledge on your behalf the greetings extended to you by our distinguished guest.

Remarks of Past President James S. McLester

Just one thing I can say to our British cousin that I said on another occasion, that is to tell him how we feel toward the British commonwealth of nations. A number of years ago right after the World War I was in the Panama Canal Zone looking over the fortifications with an army friend and I commented on the fact that the Pacific side was fortified so much better than the Atlantic side. I told him I wondered about that. He said, "Well, eventually the Atlantic side is going to be fortified just as well, but you must remember that on the Atlantic side we shall always have the British fleet."

Messages Condemning the Bombing of Hospitals and Red Cross Units

The Secretary read two telegrams, one received from the president of the China War Relief Association of America and the other from members of the medical staff of the Massachusetts General Hospital, as follows:

The Chinese people appeal to your convention to go on record in condemning the bombing of hospitals and Red Cross units in China by the Japanese air corps. The unwarranted destruction of lives and property engaged in discharging errands of mercy is growing every day and we urge the medical profession in joining their colleagues in China in protesting against such atrocities.

B. S. FONG.

The undersigned members of the medical staff of the Massachusetts General Hospital, Boston, request that the American Medical Association, now assembled in convention at San Francisco, send a resolution from that body to the President of the United States to this effect: The A. M. A. strongly condemns the ruthless killing of innocent civilians in China by Japanese bombs and appeals to you to exert every possible pressure to stop not only this inhuman practice but also the continued flow of munitions, gasoline and scrap iron to Japan from our country.

ROY MINTZ.
D. L. SISCOE.
JOHN W. CASS JR.
M. T. EADES.
BENJAMIN TENNEY JR.
R. B. KING.
WILLIAM JASON MIXTER.
PAUL NORTON.
DONALD S. KING.
ARMIN KLEIN.
GEORGE W. VAN GORDER.

It was moved by Dr. Arthur J. Bedell, Section on Ophthalmology, seconded by Dr. John Q. Myers, North Carolina, and carried after discussion, that the House of Delegates go on record as disapproving the action of any country in bombing hospitals, Red Cross units and the helpless public.

ELECTION OF OFFICERS

Dr. Olin West, Secretary, on request of the Speaker, read Sections 1 and 3, Chapter IV, of the By-Laws referring to nominations.

Election of President-Elect

Dr. Joseph F. Smith, Wisconsin, nominated for President-Elect Dr. Rock Sleyster, Wauwatosa, Wis., and the nomination was seconded by Dr. W. E. Kittler, Illinois, for the Illinois delegation, and Drs. John W. Amesse, Colorado; H. B. Everett, Tennessee; Walter E. Vest, West Virginia; Olin H. Weaver, Georgia; Tom B. Throckmorton, Section on Nervous and Mental Diseases; Burt R. Shurly, Section on Laryngology, Otology and Rhinology; William R. Molony Sr., California; C. W. Waggoner, Ohio; Frederick W. Meyer, Philippine Islands; Samuel P. Mengel, Pennsylvania; E. L. Henderson, Kentucky; J. W. Burns, Texas, and W. Albert Cook, Oklahoma.

Dr. W. H. Seemann, Louisiana, moved that the nominations be closed, and the motion was seconded by Dr. W. Albert Cook, Oklahoma, and carried unanimously.

Dr. J. W. Burns, Texas, moved that the Secretary be instructed to cast the unanimous ballot of the House for Dr. Rock Sleyster as President-Elect. The motion was seconded by Drs. H. B. Everett, Tennessee; J. Gurney Taylor, Wisconsin, and Tom B. Throckmorton, Section on Nervous and Mental Diseases, and carried unanimously.

The Secretary cast the unanimous vote of the House for Dr. Rock Sleyster, Wauwatosa, Wis., for President-Elect of the American Medical Association for the ensuing year, and the Speaker declared Dr. Sleyster so elected.

Election of Vice President

Dr. A. T. McCormack, Kentucky, addressed his remarks to the Vice Speaker, placing in nomination for Vice President the name of Dr. N. B. Van Etten, New York. The Speaker stated that there is a definite by-law which prohibits such a nomination.

Dr. A. A. Walker, Alabama, placed in nomination for Vice President the name of Dr. Howard Morrow, San Francisco, and the nomination was seconded by Dr. Clyde L. Cummer, Section on Dermatology and Syphilology, and Dr. William R. Brooksher, Arkansas.

On motion of Dr. J. Newton Hunsberger, Pennsylvania, seconded by Dr. J. E. Paullin, Section on Practice of Medicine, and carried, the nominations were closed.

It was moved by Dr. E. G. Wood, Tennessee, that the Secretary be instructed to cast the unanimous ballot of the House for Dr. Howard Morrow as Vice President. The motion was seconded by Dr. A. T. McCormack, Kentucky, and carried.

The Secretary cast the unanimous vote of the House for Dr. Howard Morrow, San Francisco, for Vice President of the American Medical Association for the ensuing year, and the Speaker declared Dr. Morrow so elected.

Address of President-Elect Rock Sleyster

The Speaker presented the President-Elect, who addressed the House as follows:

Mr. Speaker, Members of the House:

I am going to ask you to be very charitable. I confess to being somewhat emotionally upset, and as you well know this great honor has come to me as a complete surprise. We are living in a very muddled world. One example of it: As we are gathered here some seven thousand strong to perfect ways and means of saving human life, a muddled world is spending billions and working feverishly in preparation for taking human life. It is a muddled world, inhabited by muddled people who are often given to muddled thinking, and I am wondering, Mr. Speaker, how much this picture may have influenced you in deciding to try psychiatric leadership.

The House of Delegates, representing nearly 110,000 American physicians, the only body authorized to speak for American medicine, formulates and voices the principles and policies which are necessary to insure to the American people the highest standards of medical care. Your officers and your Board of Trustees are charged with the responsibility of carrying out these policies in the interim between your deliberations. A newly elected executive can do little and say little except to affirm again his loyalty to those policies and to pledge you his best efforts in their behalf. It is this I promise you.

It is difficult to find words to express to you my appreciation of the great confidence you have placed in me. I am very happy, I am very proud, I am very humble in a realization of the responsibilities I shall assume a year hence. I pray that I may be given strength and courage and wisdom to meet the trust you have placed in me. There is so little to say except I shall do my best, and thank you.

Election of Secretary

Dr. A. T. McCormack, Kentucky, nominated Dr. Olin West, Chicago, to succeed himself as Secretary of the Association, and the nomination was seconded by Dr. Charles H. Goodrich, in behalf of the delegation from New York. The nominations were closed on motion of Dr. John Q. Myers, North Carolina, seconded by several and carried.

It was moved by Dr. J. D. Brook, Michigan, seconded by Dr. H. B. Everett, Tennessee, and carried, that the Speaker cast the ballot of the House for Dr. Olin West as Secretary.

The Speaker cast the ballot of the House for Dr. Olin West, Chicago, as Secretary of the American Medical Association, which was supported by a unanimous rising vote, and the Speaker declared Dr. West elected Secretary for the ensuing year.

Election of Treasurer

Dr. Arthur W. Booth, Chairman of the Board of Trustees, stated that the Board of Trustees nominated Dr. Herman L. Kretschmer, Chicago, as Treasurer. The nomination was approved by the House, and the Speaker declared Dr. Herman L. Kretschmer elected Treasurer for the ensuing year.

Election of Speaker of the House of Delegates

Dr. E. G. Wood, Tennessee, nominated for Speaker Dr. Harrison H. Shoulders, Nashville, Tenn. The nomination was seconded by Drs. H. B. Everett, Tennessee; Virgil Simpson, Kentucky; Charles A. Dukes, California; William H. Myers, Georgia; John Q. Myers, North Carolina; J. Gurney Taylor, Wisconsin; Howard L. Snyder, Kansas, and James E. Paullin, Section on Practice of Medicine.

Dr. James E. Paullin, Section on Practice of Medicine, moved that the nominations be closed, and the motion was seconded by several delegates and carried.

On motion of Dr. H. B. Everett, Tennessee, seconded by Dr. Charles W. Roberts, Georgia, and carried, the Secretary cast the unanimous vote of the House for Dr. Harrison H. Shoulders, Nashville, Tenn., for Speaker of the House of Delegates for the ensuing year, and Dr. Shoulders was declared duly elected Speaker of the House.

Election of Vice Speaker of the House of Delegates

The Speaker declared the next order of business to be the election of a Vice Speaker of the House of Delegates.

Dr. Junius B. Harris, California, nominated for Vice Speaker Dr. Edward M. Pallette, Los Angeles, and the nomination was seconded by Dr. Robert A. Peers, for the California delegation.

Dr. Fred Moore, Iowa, nominated for Vice Speaker Dr. Roy W. Fouts, Omaha, and the nomination was seconded by Dr. John W. Amesse, Colorado.

Dr. Richard H. Miller, Massachusetts, nominated for Vice Speaker Dr. John M. Birnie, Springfield, Mass., and the nomination was seconded by Dr. William A. Ellingwood, Maine.

On motion of Dr. J. Newton Hunsberger, Pennsylvania, seconded by Dr. Arthur J. Bedell, Section on Ophthalmology, and carried, the nominations were closed, and the Speaker asked the tellers to spread the ballot.

The Secretary announced that 166 delegates had been recorded as present and that 162 votes had been cast, of which Dr. Edward M. Pallette received 42, Dr. Roy W. Fouts 95 and Dr. John M. Birnie 25.

On motion of Dr. John M. Birnie, Massachusetts, seconded by Dr. Junius B. Harris, California, and carried, the election of Dr. Roy W. Fouts, Omaha, as Vice Speaker of the House of Delegates for the ensuing year was made unanimous.

Appreciation of the Speaker, Dr. N. B. Van Etten

Dr. Charles H. Goodrich, New York, moved that the House of Delegates express its appreciation of the inspiration and thought, consideration and poise Dr. Van Etten had given it during his term as Speaker. The motion was seconded by Drs. W. H. Seemann, Louisiana; H. B. Everett, Tennessee, and George M. Fisher, New York, and carried.

Report of Council on Medical Education and Hospitals

Dr. Ray Lyman Wilbur, Chairman, presented the following report:

There seems to be some confusion in the minds of a good many of the Delegates and members of the Association as to the exact function of the Council on Medical Education and Hospitals and various other organizations now in the field both of education and of the hospitals. This is important, since we are going into a period of considerable experimentation, legislative and otherwise. It seemed desirable for you to remember that the Council has its power through the Association and that that power is largely a matter of publicity. Our relationship to the institutions that teach medical students is primarily based on the fact that we publish an approved list of those schools. That gives us a position of influence if not of power. We cannot tell those institutions what to do. Our relationship to the hospitals is largely because we have to do with the education of interns and of resident physicians and publish a list of approved hospitals for interns and residents, and also a list of hospitals on a register. Through THE JOURNAL, and particularly through the Directory which we publish, we have a direct relationship to practically all the physicians in the country.

There has come into the field in recent years the advisory board of the various specialties. That advisory board has entered on a study of graduate instruction through a commission supported by the various foundations. The chairman of that commission is Dr. W. C. Rappleye. There are two members of the Council on Medical Education and Hospitals on that commission. It is to study the philosophy of graduate instruction, not those institutions giving such instruction.

There is also in this field the American Hospital Association and the American College of Surgeons, and each hospital is apt to have a relation to these three bodies.

In connection with the advisory board on specialties we have assumed certain powers in regard to them by not joining this advisory board but asking that each board submit to the Council its constitution and its program for the approval of the Council. Some of those who were reluctant to do so found that our power largely consisted in our ability not to list them in the directory, so that I think we can say now that all of the special boards are in a direct relationship to the Council.

The hospital is becoming the center of experimentation in the fields of medical care. It is said that there are some 300 different propositions in different parts of the country, and what

goes on in the hospital is of enormous significance to us now as we approach this period when there is apt to be more and more in the way of legislative experimentation in this field.

There may be confusion between our Council and the American Hospital Association and the American College of Surgeons. We would like to have your continued support and an understanding with you that we as the representatives of the House of Delegates and the American Medical Association are in a position to take firm positions regarding certain of these propositions as they arise, and to seek the help of the other two associations. If you belong to the American College of Surgeons we ask you to help us bring about cooperation and coordination. If you are in the American Hospital Association we ask the same thing. If the medical profession in its relationship to these institutions is not a unit and not united, we are going to find ourselves in many difficulties that we can avoid by a well understood and well supported approach to these difficult questions.

I have made this statement in the hope that it would clarify for you just what is going on and so that it would leave in your minds the necessity of helping us represent you as the special problems come up, as they will, in connection not only with hospitals but with the medical schools. This is of vital importance in the field of graduate instruction, since, as I suggested the other day, we are now getting support from various sources, including the federal government, in some of these graduate courses, and what goes on there will have to go on largely through the hospitals and our relationship with those hospitals must be not only understood but backed if we are to take this common program forward. Thank you very much.

Dr. Arthur J. Bedell, Section on Ophthalmology, moved that the report of the Council on Medical Education and Hospitals be approved, and the motion was seconded by Dr. H. B. Everett, Tennessee, and carried.

Election of Trustees

The Speaker declared the next order of business to be the election of two Trustees, each to serve five years, to succeed Drs. Austin A. Hayden, Chicago, and Charles B. Wright, Minneapolis, whose terms expire this year.

Dr. Burt R. Shurly, Section on Laryngology, Otology and Rhinology, nominated Dr. Austin A. Hayden to succeed himself as a Trustee, and the nomination was seconded by Drs. G. Henry Mundt, Illinois; J. W. Burns, Texas; A. A. Walker, Alabama; Charles A. Dukes, California, and H. B. Everett, Tennessee.

The nominations were closed on motion of Dr. Arthur J. Bedell, Section on Ophthalmology, seconded by Dr. Charles H. Goodrich, New York, and carried, and the Secretary was instructed to cast the ballot of the House for Dr. Austin A. Hayden, Chicago, as Trustee, on motion of Dr. Burt R. Shurly, Section on Laryngology, Otology and Rhinology, seconded by Dr. John Z. Brown Sr., Utah, and carried.

The Secretary cast the unanimous ballot of the House for Dr. Austin A. Hayden to succeed himself as a member of the Board of Trustees for a term of five years, and the Speaker declared Dr. Hayden so elected.

Dr. W. F. Braasch, Minnesota, nominated Dr. Charles B. Wright, Minneapolis, to succeed himself as Trustee, and the nomination was seconded by Drs. J. E. Paullin, Section on Practice of Medicine; Charles W. Roberts, Georgia; J. Gurney Taylor, Wisconsin; Walter R. Steiner, Connecticut; E. L. Henderson, Kentucky; Felix J. Underwood, Mississippi, and J. W. Burns, Texas.

The nominations were closed on motion of Dr. George W. Kosmak, New York, seconded by Dr. W. H. Seemann, Louisiana, and carried.

On motion of Dr. J. D. Brook, Michigan, seconded by Dr. A. T. McCormack, Kentucky, and carried, the Secretary was instructed to cast the vote of the House for Dr. Charles B. Wright, Minneapolis, as Trustee.

The Secretary cast the unanimous vote of the House for Dr. Charles B. Wright, Minneapolis, to succeed himself as a member of the Board of Trustees for a term of five years, and the Speaker declared Dr. Charles B. Wright so elected.

Nominations for Standing Committees

Dr. Irvin Abell, President, submitted the following nominations for standing committees:

Judicial Council: Dr. John H. O'Shea, Spokane, Wash., to succeed himself, for a term ending in 1943.

Council on Medical Education and Hospitals: Dr. Frank H. Lahey, Boston, to succeed Dr. Frederic A. Washburn, who has given most efficient and excellent service and who desires to be released from further service, for a term ending in 1945.

Council on Scientific Assembly: Dr. James E. Paullin, Atlanta, Ga., to succeed himself, for a term ending in 1943.

It was moved by Dr. A. T. McCormack, Kentucky, seconded by Dr. Arthur J. Bedell, Section on Ophthalmology, and carried, that the nominations be confirmed.

Election of Affiliate and Associate Fellows

The Secretary presented the following nominations for Affiliate and Associate Fellowship, which on motions duly seconded and carried, were confirmed by the House:

NOMINATIONS FOR AFFILIATE FELLOWSHIP

Collins, Homer C., Duluth, Minn.
Heyerdale, Oscar C., Rochester, Minn.
Hickling, D. Percy, Washington, D. C.
Olsen, Marie A., Chicago.
Ramsey, Russell T., Denver.
Stoll, John J., Chicago.

NOMINATIONS OF AMERICAN MEDICAL MISSIONARIES FOR ASSOCIATE FELLOWSHIP APPROVED BY THE JUDICIAL COUNCIL

Michener, Robert B., Kaimosi, Kisumu Kenya Colony, East Africa.
Thorne, George W., Pacific Grove, Calif.
Whitcomb, Elmer William, Baitalpur, C. P., India.

NOMINATIONS FOR ASSOCIATE FELLOWSHIP APPROVED BY THE SECTIONS INDICATED

LARYNGOLOGY, OTOLOGY AND RHINOLOGY

Ambrecht, Edward C., Wheeling, W. Va.

PATHOLOGY AND PHYSIOLOGY

Clawson, Benjamin J., Minneapolis.
Erlanger, Joseph, St. Louis.
Quigley, John P., Cleveland.
Rose, William C., Urbana, Ill.

PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH

Miller, Ray Norris, Emporia, Kan.

Place of 1939 Annual Session

The Speaker announced that the next order of business was the selection of the place of the 1939 annual session.

Dr. G. Henry Mundt, Illinois, extended an invitation from the Chicago Medical Society and the Illinois State Medical Society to the American Medical Association to hold its 1939 annual session in Chicago.

Dr. Carl F. Vohs, Missouri, extended an invitation from the St. Louis Medical Society and the Missouri State Medical Association to the American Medical Association to meet in St. Louis in 1939. The invitation was supported by Dr. Floyd S. Winslow, for the delegates of the Medical Society of the State of New York, and by the Ohio delegation.

Dr. Francis F. Borzell, Pennsylvania, extended an invitation from Philadelphia, the Medical Society of the State of Pennsylvania and the medical schools in Philadelphia to the American Medical Association to meet in Philadelphia in 1939.

Dr. H. A. Luce, Michigan, extended an invitation from the state of Michigan, from Detroit and from the component county and constituent state medical societies to the American Medical Association to hold its 1939 annual session in Detroit. The invitation was supported by Dr. Burt R. Shurly, Section on Laryngology, Otology and Rhinology.

Dr. Walt P. Conaway, New Jersey, extended an invitation from the Medical Society of New Jersey and from the Atlantic County Medical Society to the American Medical Association to meet in Atlantic City in 1939.

Dr. Arthur W. Booth, Chairman, Board of Trustees, presented the following report: The following cities have sent invitations, within the limits according to our rules, and these are arranged

alphabetically: Atlantic City, Chicago, Cleveland, Detroit, Kansas City, Minneapolis and St. Paul, New York, Philadelphia, St. Louis.

New York has specifically asked to have the session of the American Medical Association in 1940; Minneapolis and St. Paul, Twin Cities, as well as Detroit and St. Louis in any of the three years 1939, 1940 or 1941.

On request of Dr. J. C. Flippin, Virginia, the Secretary presented a statement with respect to the facilities for holding the annual session of the American Medical Association in the cities that had sent invitations.

The Speaker announced that the American Medical Association had been invited to meet in 1939 in Chicago, St. Louis, Philadelphia, Detroit and Atlantic City. He asked the tellers to spread the ballot, and the Secretary announced that 167 delegates had been reported present and that 161 votes had been cast, of which Atlantic City received 29, Chicago 25, Detroit 10, Philadelphia 21 and St. Louis 76.

The Speaker announced that another vote would have to be taken since no city had received a majority of the votes and that in accordance with the rules the city receiving the smallest number of votes, namely, Detroit, would have to be dropped from the ballot. He added that he had been requested to announce that in order to expedite the vote Philadelphia would retire from the contest so that there would be three cities for which to vote: Chicago, St. Louis and Atlantic City.

The Secretary announced that 167 delegates had been reported present and that 143 votes had been cast, of which St. Louis received 93, Atlantic City 36 and Chicago 14, and the Speaker declared that the House of Delegates had selected St. Louis for the 1939 annual session of the American Medical Association.

Place of 1940 Annual Session

On motion of Dr. Arthur J. Bedell, Section on Ophthalmology, duly seconded and carried, the nominating speeches were limited to one minute each.

Dr. Francis F. Borzell, Pennsylvania, invited the American Medical Association to meet in Philadelphia in 1940, extending the invitation from Philadelphia, the Medical Society of the State of Pennsylvania and the medical schools in Philadelphia.

Dr. Frederic E. Sondern, New York, invited the American Medical Association to hold its 1940 annual session in New York City, and the invitation was supported by Dr. Carl R. Steinke, for the Ohio delegation, Dr. James R. McVay, for the Missouri delegation and Dr. Charles S. Skaggs, Illinois.

On motion of Dr. Arthur J. Bedell, Section on Ophthalmology, regularly seconded and carried, the nominations were closed and the Speaker announced that New York, Philadelphia and Atlantic City were the cities placed in nomination for the 1940 annual session of the American Medical Association.

The Secretary announced that 167 delegates had been recorded present and that 132 votes had been cast, of which number New York received 83, Atlantic City 31 and Philadelphia 18, and the Speaker declared that the House of Delegates had selected New York City for the 1940 annual session of the American Medical Association.

Place of 1941 Annual Session

Dr. J. D. Brook, Michigan, extended an invitation to the American Medical Association to meet in Detroit in 1941.

Dr. Clyde L. Cummer, Section on Dermatology and Syphilology, extended an invitation from the Ohio State Medical Association and from the Academy of Medicine of Cleveland to the American Medical Association to hold its 1941 annual session in Cleveland and the invitation was supported by several delegates.

Dr. James T. Christison, Minnesota, in behalf of the Hennepin County Medical Society at Minneapolis, the Ramsey County Medical Society at St. Paul, and the Minnesota State Medical Association, invited the American Medical Association to hold its 1941 annual session in St. Paul-Minneapolis.

Dr. R. K. Packard, Illinois, invited the American Medical Association to hold its 1941 annual session in Chicago.

On motion of Dr. Arthur J. Bedell, Section on Ophthalmology, seconded by Drs. George M. Fisher, New York, and Clyde L. Cummer, Section on Dermatology and Syphilology, and carried, the nominations were closed, and the Speaker stated that Cleveland, Detroit, St. Paul and Minneapolis, and Chicago were the cities placed in nomination for the 1941 annual session of the American Medical Association.

The Secretary announced that 167 delegates had been recorded present and that 129 votes had been cast, of which Cleveland received 70, Chicago 27, Detroit 22, and St. Paul and Minneapolis 10, and the Speaker declared that the House of Delegates had selected Cleveland for the 1941 annual session of the American Medical Association.

Message of Appreciation

Dr. Irvin Abell, President, moved that the House of Delegates express, on behalf of the American Medical Association, sincere thanks and appreciation to the members of the California Medical Association, particularly to those residing in San Francisco, Oakland and the adjacent cities, and still more particularly to the chairmen of the various committees who had worked so hard for the comfort, pleasure and entertainment of the members of the Association; also to the press and to the most courteous citizens of this city as well as to the Woman's Auxiliary of the American Medical Association for their gracious hospitality extended during the session. The motion was seconded by Dr. Gunnar Gundersen, Wisconsin, and carried by a rising vote.

The House of Delegates adjourned sine die at 4:45 p. m.

REGISTRATION AT SAN FRANCISCO

The total registration at the San Francisco session, June 13 to 17, 1938, was 6,034. Below are given two summaries—one by states and one by sections:

Registration by States

Alabama	17	Nevada	38
Arizona	76	New Hampshire	4
Arkansas	13	New Jersey	38
California	3,143	New Mexico	13
Colorado	102	New York	205
Connecticut	22	North Carolina	10
Delaware	2	North Dakota	14
District of Columbia	42	Ohio	154
Florida	25	Oklahoma	56
Georgia	31	Oregon	167
Idaho	40	Pennsylvania	122
Illinois	236	Rhode Island	3
Indiana	66	South Carolina	6
Iowa	76	South Dakota	10
Kansas	60	Tennessee	34
Kentucky	35	Texas	167
Louisiana	39	Utah	86
Maine	4	Vermont	6
Maryland	30	Virginia	30
Massachusetts	63	Washington	173
Michigan	98	West Virginia	13
Minnesota	101	Wisconsin	58
Mississippi	5	Wyoming	16
Missouri	95	Miscellaneous	89
Montana	30		
Nebraska	71	Total	6,034

Registration by Sections

Practice of Medicine	1,876
Surgery, General and Abdominal	1,190
Obsterics and Gynecology	423
Ophthalmology	301
Laryngology, Otology and Rhinology	227
Pediatrics	253
Pharmacology and Therapeutics	37
Pathology and Physiology	176
Nervous and Mental Diseases	217
Dermatology and Syphilology	182
Preventive and Industrial Medicine and Public Health	168
Urology	210
Orthopedic Surgery	150
Gastro-Enterology and Proctology	139
Radiology	213
Two or more sections or no section marked	272
Total	6,034

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION AND PUBLIC HEALTH.)

ARKANSAS

District Meeting.—The First Councilor District Medical Society was addressed in Paragould May 12 by Drs. John E. McGuire, Piggott, on scarlet fever; Thomas F. Hudson, Luxora, the black widow spider bite; Bonny M. Stevenson, Marion, the problem of syphilis; Robert H. Willett, Jonesboro, the relative value of high voltage roentgen therapy in uterine hemorrhages, and Martin E. Blanton, Jonesboro, eye injuries. Dr. Robert J. Haley, Paragould, gave the address of welcome.

CALIFORNIA

Mussel Quarantine.—The state department of health has established a quarantine on mussels from the southern boundary of Los Angeles County to the Oregon line, exclusive of San Francisco Bay. The quarantine prohibits the taking, sale or offering for sale of mussels growing within the designated area. It will continue through July, August and September.

State Medical Election.—Dr. Charles A. Dukes, Oakland, was chosen president-elect of the California Medical Association at its recent annual meeting in Pasadena and Dr. William W. Roblee, Riverside, was installed as president. Dr. George H. Kress, Los Angeles, was elected secretary-treasurer and director of public relations, succeeding Dr. Frederick C. Warnshuis, effective July 1, and reelected editor of *California and Western Medicine*.

DISTRICT OF COLUMBIA

Personal. — Capt. Samuel Ross Taggart, medical detachment, 260th coast artillery, District of Columbia National Guard, received the Soldier's Medal April 21 for heroism in rescuing a man from drowning at Virginia Beach, Va.——Mr. Theodore Wiprud, newly appointed executive secretary of the Medical Society of the District of Columbia, was guest of honor at a reception given by the society June 3.——Leland Wilbur Parr, Ph.D., has been promoted to professor of bacteriology at George Washington University School of Medicine.

GEORGIA

New Director of Division of Malaria. — Justin M. Andrews, Sc.D., associate professor of protozoology, School of Hygiene and Public Health, Johns Hopkins University, Baltimore, has been appointed director of the division of malaria investigation of the Georgia State Department of Health.

Special Society Elections. — Dr. Cornelius F. Holton, Savannah, was elected president of the newly organized Industrial Surgeons Association at its meeting in Augusta; Dr. Robert L. Rhodes, Augusta, is vice president and Dr. John W. Simmons, Brunswick, secretary-treasurer. The new society will meet jointly with the Insurance Claim Agents' Association of the state and the Georgia Manufacturers' Association in handling the problems of industrial claims.——Dr. Lewellyn H. Muse, Atlanta, was named president-elect of the Georgia Pediatric Society at its annual business meeting in Augusta. Dr. Charles Hall Farmer, Macon, was installed as president, succeeding Dr. Roger W. Dickson, Atlanta.

ILLINOIS

New Buildings at State Hospital.—A group of thirteen buildings was dedicated at the Dixon State Hospital, Dixon, May 20. The buildings were recently completed at a cost of $1,250,000, financed by federal public works funds. Begun in 1927, the project includes an administration building, a nurses' home, two infirmaries, eight cottages for patients and a "maximum security" building or prison, it was reported. The cottages for patients are one story high, of brick, each unit being built in a series of wings. The new facilities will accommodate 1,200 additional patients.

Chicago

Competition Open for Prize.—The Institute of Medicine of Chicago announces that competition for the 1938 Joseph A. Capps Prize is open to graduates of Chicago medical schools who completed their internship or one year of laboratory work in 1936 or thereafter. The prize of $400 is awarded for the most meritorious investigation in medicine or in the specialties; investigation may also be in the fundamental sciences, provided the work has a definite bearing on some medical problem. Manuscripts should be submitted to the Institute of Medicine of Chicago, 86 East Randolph Street, not later than December 31.

Apprehend Robber of Pregnant Women.—Basil Lezak, 304 West Division Street, was arrested on the street June 3. Lezak, who was carrying a physician's bag, confessed to the police that he had been victimizing pregnant women under the representation that he was sent by the city or state health department, by some hospital in the vicinity or by the WPA to examine them. About two years ago he was placed on six months' probation for treating persons with medicine composed of some vegetable extract, it was reported. He was sentenced June 10 to six months in the house of correction on each of two counts of petty larceny.

INDIANA

Society News. — Dr. Roscoe L. Kleindorfer, Evansville, discussed "First Aid Treatment of Injuries and Burns" before the Knox County Medical Society in Vincennes recently.——At a meeting of the Monroe County Medical Society in Bloomington Dr. Paul Merrell, Indianapolis, spoke on "Thoracic Surgery."——A recent meeting of the Hancock County Medical Society was addressed in Greenfield by Dr. Martin H. Fischer, Cincinnati, on "Physiologic Treatment of Heart Disease."——The Tippecanoe County Medical Society was addressed in Lafayette recently by Dr. Harry E. Mock, Chicago, on "Conservative Treatment of Gallbladder and Appendicitis."——Dr. Harold M. Trusler, Indianapolis, discussed "Treatment of Extensive Burns" before the Delaware-Blackford Medical Society in Muncie recently.——At a meeting of the Henry County Medical Society in Newcastle Dr. James H. Stygall, Indianapolis, spoke on pneumothorax.——Dr. Stanley P. Reimann, Philadelphia, discussed "The Diagnosis of Secondary Breast Tumors and Relation of Hormones to Cancer" before a joint meeting of the Fort Wayne and St. Joseph county medical societies in Fort Wayne recently. He conducted a clinic in the afternoon and addressed a public meeting in the evening.——The Gibson County Medical Society was recently addressed in Princeton by Dr. Laman A. Gray, Louisville, Ky., on "Leukorrhea and Office Gynecology."

IOWA

Smallpox Regulations Revised.—Regulations by the state department of health about smallpox have been revised to place primary emphasis on successful vaccination or revaccination and on isolation of active cases and of susceptible persons. The new regulations permit the breadwinner to enter and leave his home to continue the support of his family, provided he shows definite evidence of immunity to smallpox. Persons having the disease will be isolated for a minimum period of fourteen days. Children who have been exposed to smallpox but who have not been successfully vaccinated, previously or within seventy-two hours after initial exposure, will be isolated for a minimum period of twenty-one days. It is expected that the new regulations will increase attention to specific means of prevention, applied early in life and repeated before and after admission to school. During the thirty year period 1908-1937, officially reported cases of smallpox in Iowa totaled 50,303; of these 207 persons died.

LOUISIANA

Society News.—The Orleans Parish Medical Society was addressed June 13 at the U. S. Marine Hospital, New Orleans, by P. A. Surg. Paul E. Walker on "Pontocaine Anesthesia"; P. A. Surg. Joseph G. Pasternack, "Unusual Bone Tumors"; and P. A. Surgeon (R.) Henry D. Stroupe and Asst. Surg. (R.) William M. Boles, "Treatment of Corneal Ulcer with Fever Therapy." The society was addressed May 9 by Drs. Edwin A. Socola on "Banana and Banana Powder Therapy in Diarrheal Diseases of Infants and Young Children"; Dean H. Echols, "Ruptured Intervertebral Disk as a Cause of Sciatic Pain," and Leo N. Elson, "Treatment of Tularemia."

MARYLAND

Dr. Maxcy Joins Epidemiology Department at School of Hygiene and Public Health.—Dr. Kenneth F. Maxcy has resigned as professor and head of the department of bacteriology at Johns Hopkins University School of Hygiene and Public Health to become professor and head of the department of epidemiology. Dr. Maxcy joined the Johns Hopkins staff in 1937 after resigning as professor and head of the department of preventive medicine and public health at the University of

Minnesota Medical School, Minneapolis. He graduated from the Johns Hopkins school of medicine in 1915. He is a scientific director of the International Health Division of the Rockefeller Foundation.

MICHIGAN

Personal.—Dr. Anthony J. J. Rourke, assistant superintendent, Vanderbilt Clinics, Presbyterian Hospital-Columbia University Medical Center, New York, has been appointed assistant director of the University Hospital, Ann Arbor, succeeding George P. Bugbee, who will become superintendent of the Cleveland City Hospital. The change was effective July 1.

Changes at the University.—The following promotions at the University of Michigan Medical School, Ann Arbor, were recently announced:

Dr. Herman M. Pollard to assistant professor of internal medicine.
Dr. Lloyd F. Catron to assistant professor of pathology.
Dr. Cameron Haight to associate professor of surgery.
Dr. Jerome W. Conn to assistant professor of internal medicine.
Dr. Isadore Lampe to assistant professor of roentgenology.

New Institute for Neuropsychiatry.—Ground has been broken for the new Neuropsychiatric Institute at the University Hospital, Ann Arbor. The building will be in the form of a wing to the north of the University Hospital and will be connected to the main building by corridors. The main section will be five stories high, flanked on each end by pavilions three stories high. The fourth floor of the new building will be on the level of the first floor of the main hospital. Provision will be made for the care of sixty-three adults and twenty children. There will be facilities for occupational therapy, physical therapy and hydrotherapy. The neuropathologic and research laboratories will be on the first floor of the new building. According to the *University Hospital Bulletin* the new unit is designed to form a center for the diagnosis, care and active treatment of forms of incipient mental disease which are not likely to receive adequate care until a state of more profound disability is reached. Only patients who are ready to come on a voluntary basis are treated, entering through the regular admitting department of the University Hospital.

MINNESOTA

Society News.—Chauncey Leake, Ph.D., San Francisco, gave a Mayo Foundation lecture at the Mayo Clinic, Rochester, June 6 on "Pharmacologic Aspects of Central Nervous System Activity." Dr. Owen H. Wangensteen, Minneapolis, gave a lecture May 19 at the clinic on "The Problem of Therapy in Acute Intestinal Obstruction."

Personal.—Dr. Frank C. Mann, Rochester, received the honorary degree of doctor of laws from his alma mater, Indiana University, Bloomington, Ind., at its commencement exercises June 13, at which he delivered the annual address. Dr. Mann will deliver a lecture before the Royal College of Surgeons, London, in July on "The Etiology of Peptic Ulceration."—— Dr. Ralph X. Rossen, St. Peter, has been appointed superintendent of the state hospital at Hastings to succeed William J. Yanz, who has resigned after thirty-eight years' service. The change was effective June 30.

Ten Years for Illegally Obtaining Morphine.—Katherine Burkhardt pleaded guilty June 8 to a charge of obtaining morphine by fraud, deceit, misrepresentation and subterfuge and was sentenced to a term of not to exceed ten years in the Women's Reformatory at Shakopee. A drug addict, the defendant is the first person to be prosecuted for obtaining morphine by fraud or misrepresentation under the Minnesota Uniform Narcotic Drug Act, passed in 1937. The maximum penalty for a violation of the act is five years' imprisonment in a state penal institution. In this case the defendant received a ten year sentence because she had two prior convictions for felonies in the U. S. District Court. The woman obtained nineteen prescriptions for a total of 233¼ grain morphine sulfate tablets from six Minneapolis physicians between March 26 and 30. She obtained these prescriptions by misrepresenting her physical condition and falsifying her name and address. She used many aliases in obtaining the prescriptions. She stated that her maiden name was Mahoney, that her married name was Burkhardt and that she had been divorced in 1926. She admitted that she had been addicted to the use of morphine for sixteen years. She claimed that she suffered from chronic asthma, that she had a tumor on her spine and suffered from adhesions following an operation. In 1933 the defendant was sentenced in the federal court in Minneapolis to a three year term in the Federal Industrial Institution for Women at Alderson, W. Va., for violation of the Harrison Narcotic Act; in 1936 she was sentenced in the federal court at St. Paul to serve ten months in the Minneapolis Work House for a similar offense.

MISSISSIPPI

Changes in State Department of Health.—Dr. Henry C. Ricks, for ten years director of county health work of the state department of health, Jackson, has been appointed director of the state hygienic laboratory, effective May 1, following the retirement of Dr. Theodore W. Kemmerer. Dr. John A. Milne will succeed Dr. Ricks as director of county health work and continue to serve in his present position as director of maternal and child welfare division and health education. Dr. Kemmerer has served as director of the hygienic laboratory for fourteen years.

MISSOURI

Physician Given Civic Award.—Dr. Avery P. Rowlette, medical director of City Hospital and assistant professor of clinical surgery, Washington University School of Medicine, St. Louis, was presented May 19 with the distinguished service award of the U. S. Junior Chamber of Commerce for outstanding civic service in St. Louis during 1937. The award, a gold key, is given annually to a St. Louisan under 36 years of age who is chosen by the Young Men's Division of the chamber of commerce. Dr. Rowlette was cited for his work on the new psychopathic clinic now under construction, the new Homer G. Phillips Hospital for Negroes, and his services as medical director during the Southeastern Missouri floods in the early part of 1937. He graduated at Washington University School of Medicine in 1929.

Society News.—Dr. Charles T. Reid, Joplin, discussed "Tinnitus Aurium" before the Jasper County Medical Society in Joplin recently.——At a meeting of the Cooper County Medical Society recently Dr. Eugene P. Hamilton, Kansas City, spoke on "Diagnosis and Treatment of Appendicitis" and Dr. Dudley S. Conley, Columbia, "Some Problems of Our Medical Organizations." Dr. Conley addressed a recent meeting of the Ninth Councilor District Medical Society at Rolla and Dr. Edwin Lee Miller, Kansas City, "Hepatorenal Syndrome in Relation to the Liver Death." The society was the guest of the Phelps-Crawford County Medical Society.——The Trudeau Club, St. Louis, was addressed May 5, among others, by Dr. Israel J. Flance on "Postmortem Incidence of Tracheobronchitis."——Dr. Roscoe L. Sensenich, South Bend, Ind., discussed "The Social Aspects of Sickness" before the Jackson County Health Forum recently in Kansas City.

NEBRASKA

Honorary Members of State Association.—At a meeting of the council of the state medical association the following were voted honorary members: Drs. Rudolph Rix, Omaha; Don F. Morris, Lewellen; Arthur E. Cook, Randolph; Martin L. Sparks, Bloomington; John A. Waggener, Humboldt, and George J. Rubelman, Tecumseh.

Society News.—At a meeting of the Omaha-Douglas County Medical Society recently Drs. Perrin H. Long, Baltimore, discussed sulfanilamide and Willis D. Wright, Omaha, "The Anemias Associated with Hypothyroidism."——A symposium on cancer was presented before the Dawson County Medical Society in Lexington recently by Drs. Howard B. Hunt, James Perry Tollman and Charles W. McLaughlin Jr., all of Omaha. Dr. McLaughlin also discussed surgery in children.——Dr. William J. Arrasmith, Grand Island, addressed the Four County Medical Society in Spalding May 5 on goiter.——The Platte-Loup Valley Medical Society was addressed at Columbus May 11 by Dr. James E. M. Thomson, Lincoln, on "Fractures of the Foot and Ankle."

Annual Assembly.—The sixth annual assembly of the Omaha Mid-West Clinical Society will be held at the Hotel Paxton, Omaha, October 24-28. In addition to lectures by members of the faculties of Creighton and Nebraska universities, the guest speakers will include:

Dr. Henry L. Bockus, Philadelphia, medicine.
Dr. Robert T. Frank, New York, gynecology and obstetrics.
Dr. Cameron Haight, Ann Arbor, surgery.
Dr. Louis J. Hirschman, Detroit, surgery.
Dr. Edward L. Jenkinson, Chicago, radiology.
Dr. Foster Kennedy, New York, neurology.
Dr. Gordon B. New, Rochester, Minn., otolaryngology.
Dr. Oliver S. Ormsby, Chicago, dermatology.
Dr. Oliver H. Perry Pepper, Philadelphia, medicine.
Dr. Heyworth N. Sanford, Chicago, pediatrics.
Dr. Alfred R. Shands Jr., Wilmington, Del., orthopedic surgery.

A symposium on anesthesia will be presented by Drs. John S. Lundy, Rochester; Kenneth C. McCarthy, Toledo; Archibald Ross McIntyre, Omaha; John A. Moffitt, Oklahoma City, and Ralph M. Waters, Madison, Wis.

NEW HAMPSHIRE

Industrial Survey.—The state board of health announced in its May bulletin that a preliminary study of industries in New Hampshire with reference to occupational disease is in progress. The survey is the result of a recommendation made in the report of the Commission for the Study of Occupational Diseases in New Hampshire to the governor in 1937. It is the purpose of the study to obtain information concerning the environment associated with the various occupations which potentially may have an effect on the health of employees. The commission was formed in 1935.

NEW JERSEY

Hospital News.—A three months graduate course in gynecology and obstetric pathology is being conducted at the Margaret Hague Maternity Hospital, Jersey City, by Dr. Nicholas M. Alter and his associates.——The Hospital of St. Barnabas, Newark, dedicated a new six story extension recently; the new addition accommodates eighty beds, operating, x-ray and maternity facilities and offices.

NEW YORK

Society News.—Dr. Fred W. Geib, Rochester, discussed "Brain Trauma" before the Medical Society of the County of Monroe at a meeting May 19. At a meeting of the society May 17 Dr. Arthur C. Christie, Washington, D. C., spoke on "Modern Trends in Medicine with Special Reference to Hospital Insurance."

Outbreak of Dysentery.—Seventy-one cases of gastrointestinal illness are known to have occurred between May 17 and 31 in two adjacent villages in Albany County, according to *Health News*. Specimens submitted from three persons during the acute stage yielded dysentery bacilli of the Sonne type. Water from the system which supplied both villages was found to be the one factor common to all cases. The water supply is taken from a creek and treated by chlorine but not filtered. Interruption in chlorination of the water was reported to have occurred on at least one occasion preceding the outbreak. Coincident with the failure of chlorination, a heavy rainfall also increased pollution of the source of supply.

Personal.—Dr. Karl Fischel, superintendent and medical director of the Will Rogers Memorial Hospital, Saranac Lake, N. Y., for four years, has resigned.——Oskar Baudisch, director of the research division, Saratoga Springs Commission, State of New York, has been appointed associate in biochemistry at the Albany Medical College; he will continue his connection with the commission.——Dr. Willard H. Sweet was guest of honor at a dinner in Croton, April 18, given by the medical board of Peekskill Hospital to mark his retirement as president of the board. Dr. William S. Bainbridge, New York, was the guest speaker.——Dr. Otto Pfaff, Oneida, was recently honored by Oneida friends with a testimonial dinner on completion of fifty years of medical practice.——James H. Foster, director of the child aid bureau of the state social welfare department, Albany, died May 9; he had served thirty years in the state's employ.——Mrs. Elizabeth Wilmot Newcomb, founder and first president of the Stony Wold Sanatorium, Lake Kushaqua, died May 30, aged 78. Mrs. Newcomb was instrumental in raising funds to build a cottage at the Trudeau Sanatorium, Saranac Lake, but on the advice of the late Dr. Edward L. Trudeau she purchased and remodeled as a sanatorium an old country hotel at Lake Kushaqua. It was incorporated as the Stony Wold Sanatorium in 1901.

New York City

Dr. Hammarsten Gives Janeway Lectures.—Einar Hammarsten, professor of chemistry, Caroline Medical and Surgical Institute, Stockholm, Sweden, gave the Edward Gamaliel Janeway Lectures at the Mount Sinai Hospital of New York, May 24, on "Duodenum and Its Associates, the Important Hormonal Centrum" and May 26, "Cell Structure: Functions of Nucleic Acid."

Changes at New York University.—Dr. Thomas A. Gonzales, chief medical examiner of the city, has been promoted from associate professor to professor of forensic medicine at New York University College of Medicine. Other promotions include those of Wendell J. S. Krieg, Ph.D., to assistant professor of anatomy and David Wechsler, Ph.D., assistant clinical professor of psychiatry.

Dr. Howard Fox Becomes Professor Emeritus.—Dr. Howard Fox has retired as professor of dermatology and syphilology at New York University College of Medicine with the title of professor emeritus. He had been associated with the school since 1925. Dr. Fox was born in London, England, July 4, 1873; he received his degree in medicine at Columbia University College of Physicians and Surgeons in 1898 and later took graduate work in Berlin and Vienna. He taught at Dartmouth Medical College and the New York Polyclinic Medical School. During the World War he was commanding officer of base hospital number 136, Vannes, France. He served as president of the American Dermatological Association and of the American Board of Dermatology and Syphilology and in 1935 as honorary president of the ninth International Congress of Dermatology, Budapest. A testimonial dinner in his honor was held at Sherry's recently.

Personal.—Mary B. Stark, Ph.D., professor and head of the department of histology and embryology at the New York Medical College and Flower Hospital, received the honorary degree of doctor of science from Hamline University, St. Paul, June 6.——Dr. Herbert W. Wade, medical director, Leonard Wood Memorial in the Philippine Islands, was the guest of honor May 1 at a dinner given by the medical advisory board of the memorial at the Union League Club. The speakers included Frank R. McCoy, major general, U. S. Army, Washington, D. C., and Dr. Thomas Parran, surgeon general, U. S. Public Health Service, Dr. Wilbur A. Sawyer and Perry Burgess.——The staff of Mount Sinai Hospital, New York, gave a dinner June 2 to Dr. Israel Strauss in celebration of his sixty-fifth birthday and "in honor of his many years of distinguished service in the hospital and the profession," according to *Science*.——Dr. Jose Arcé, professor of surgery, University of Buenos Aires, was elected to honorary membership in the Medical Society of the State of New York at its recent annual meeting.——Dr. George Gray Ward, who retired in April as chief surgeon of the Woman's Hospital, was presented with a silver bowl at a recent reception in his honor; he has been made chief surgeon emeritus and consulting surgeon of the hospital.——Dr. Rufus I. Cole was honored recently at a dinner at the Rockefeller Institute for Medical Research; he was presented with a bound set of volumes of reprints from the institute hospital, from which he resigned as director last year.——Dr. Max Pinner, Ithaca, has been appointed chief of the division of pulmonary diseases at Montefiore Hospital, effective September 1.

NORTH CAROLINA

Changes at State Hospital.—Dr. John McCampbell, superintendent of the State Hospital, Morganton, has resigned from the position after thirty years of service and has been succeeded by Dr. Fonso B. Watkins, first assistant physician for twenty-six years. Dr. McCampbell was the second superintendent to head the hospital since its founding in 1883. The new superintendent is a native of North Carolina and a graduate of Jefferson Medical College, Philadelphia. Dr. Roy H. Long, a member of the medical staff, has been appointed to succeed Dr. Watkins with the title of assistant superintendent, and Dr. John R. Saunders, Lewiston, formerly a member of the staff, was appointed to fill the vacancy made by the changes.

OHIO

Graduate Day.—The Columbus Academy of Medicine sponsored a graduate day at the Scioto Country Club, Columbus, June 2. A golf tournament preceded the scientific program; speakers in the latter included:

Dr. Walter C. Alvarez, Rochester, Minn., Some Fairly Common but Usually Unrecognized Causes of Abdominal Discomfort.
Dr. Roy D. McClure, Detroit, Acute Pancreatitis.
Dr. Charles E. Galloway, Evanston, Ill., Prevention and Treatment of Puerperal Fever.

These speakers also addressed the evening session: Dr. Alvarez, "Constipation and Diarrhea"; Dr. McClure, "Modern Treatment of Burns," and Dr. Galloway, cervical lesions and an exhibit of colored photography of the cervix.

District Meetings.—The Eighth Councilor District Medical Society were guests of Dr. Louis Mark and the Rocky Glen Sanatorium at McConnelsville, June 23, for the annual midsummer meeting. The speakers included Drs. Louis J. Roth, Columbus, on "Educational Campaign Against Syphilis in Columbus" and George W. Crile, Cleveland, "Clinical Aspects of Essential Hypertension and Recurrent Hyperthyroidism."——The Second Councilor District of the Ohio State Medical Association held a meeting in Dayton recently. The guest speakers were Drs. Claire L. Straith, Detroit, who spoke on "Crossroad Surgery" and "Plastic Surgery of the Head and Face"; Pascal Brooke Bland, Philadelphia, on "Prevention of Uterine Cancer," and Gerald S. Shibley, Cleveland, "Diagnosis and Treatment of Pneumonia." Dr. John B. Alcorn, Columbus, president of the state association, and Mr. Charles S. Nelson, Columbus, executive secretary, spoke on organization activities.

OREGON

Hospital News.—Plans are under way to present the sanatorium now under construction at McCredie Hot Springs to the University of Oregon as soon as the buildings are finished.

Plague Infection.—Plague infection has been proved in tissue from one Citellus oregonus found dead April 23, 7 miles northwest of Hereford, Baker County, according to *Public Health Reports*. It was also proved in fifty-one fleas collected May 2 from eighty-eight of the squirrels in the same region.

PENNSYLVANIA

District Meetings.—The first annual meeting of the Twelfth Councilor District Medical Society was held in Dallas June 29. The speakers included Drs. Chauncey L. Palmer, Pittsburgh, on "Concentrating on Constructive Public Health Activities" and Charles H. Goodrich, Brooklyn, "Prevention of Injuries and Chronic Diseases and the Economics Related Thereto."——At the annual meeting of the Fourth Councilor District Medical Society in Pottsville June 30 the speakers included Dr. Emil Novak, Baltimore, on "Use of Endocrine Substances in Treatment."

Philadelphia

Personal.—Dr. William Egbert Robertson has been appointed chief medical director of the Northeastern Hospital and Dr. Alexander Silverstein consulting neurologist.

Changes at Jefferson Medical College.—Dr. James Torrance Rugh has retired as professor of orthopedic surgery at Jefferson Medical College and has been named professor emeritus and consulting orthopedic surgeon to the college hospital. Dr. Rugh graduated at Jefferson in 1892. He has been a member of the orthopedic faculty at his alma mater for forty-six years. In 1934 the senior class of the college presented a portrait of Dr. Rugh to the college. The following changes in the faculty during the past session are reported among others:

Dr. John B. Flick, clinical professor of surgery.
Dr. Lewis C. Scheffey, clinical professor of gynecology.
Dr. B. B. Vincent Lyon, associate professor of medicine.
Dr. Garfield G. Duncan, assistant professor of medicine.
Dr. Abraham Cantarow, assistant professor of medicine.
Dr. Victor G. Haury, assistant professor of pharmacology.
Dr. Baxter L. Crawford, assistant professor of pathology.

Pittsburgh

Society News.—Dr. Herbert Windsor Wade, Culion, P. I., addressed the Pittsburgh Academy of Medicine May 6 on "Leprosy as a World Problem." Dr. Harry M. Little, among others, addressed the academy recently on "The Child Guidance Center: Its Sphere of Usefulness to the Medical Profession."——The Allegheny County Medical Society was addressed May 17 by Drs. Thomas L. McCullough on "Treatment of Acute Suppurative Fulminating Fronto-Ethmoiditis" and Roy R. Snowden, "Allowing for Physiological Adjustment in Establishing the Diet in Diabetes Mellitus."——At a meeting of the General Health Council in Pittsburgh May 12 Dr. Thomas Parran, Washington, D. C., surgeon general, U. S. Public Health Service, spoke on "Venereal Disease Control" and Mr. Bleecker Marquette, executive secretary, Health Federation of Cincinnati, "The Community Value of a Health Council."

SOUTH CAROLINA

State Medical Election.—Dr. Douglas Jennings, Bennettsville, was chosen president-elect of the South Carolina Medical Association at its annual meeting in Myrtle Beach May 17-19 and Dr. James R. Des Portes, Fort Mill, was installed as president. Dr. George E. Thompson, Spartanburg, was chosen vice president, and Dr. Edgar A. Hines, Seneca, was reelected secretary-treasurer. The 1939 session will be held in Spartanburg.

SOUTH DAKOTA

Personal.—Dr. Edmund Stephen Donohue, Gregory, has been appointed superintendent of the Gregory County Board of Health.

Meeting of Academy of Science.—Ward L. Miller, Ph.D., State College, Brookings, was elected president of the South Dakota Academy of Science at its annual meeting at Yankton College recently. Vice presidents are Walter V. Searight, Ph.D., Vermillion, and Alvin L. Moxon, State College. Arthur L. Haines, A.M., Vermillion, is the secretary. David D. Whitney, Ph.D., professor of zoology, University of Nebraska, was the guest speaker; his subject was "Heredity in Man."

TENNESSEE

Dr. G. Canby Robinson Honored.—A dinner in honor of Dr. G. Canby Robinson, Baltimore, was given, June 7, by members of the faculty of Vanderbilt University School of Medicine, Nashville, where Dr. Robinson served as dean from 1921 to 1929. Dr. Charles Sidney Burwell, dean, Harvard University Medical School, Boston, and formerly head of the department of medicine at Vanderbilt, was toastmaster. A portrait of Dr. Robinson, painted by Thomas Corner of Baltimore, was presented to the university on behalf of friends, by Dr. Ernest W. Goodpasture, professor of pathology. The portrait will be hung in the school of medicine. A book of clippings and photographs showing the progress of the school from its founding until the present, and including signatures of all guests at the dinner, was presented to Dr. Robinson. The speakers included Drs. Waller S. Leathers, dean of the school, William H. Witt, Hugh J. Morgan and Glenn E. Cullen, Ph.D., director of the Pediatric Research Institute of Cincinnati and formerly professor of chemistry at Vanderbilt.

TEXAS

Hospital News.—Dr. Elmer W. Jones, Wellington, who has owned and operated the Wellington Hospital for many years, recently gave the entire plant to the Sisters of St. Dominic, it is reported.——The George A. Griffith Memorial Hospital, a unit of the Sanatorium of Paris, was dedicated recently. The new building, constructed at a cost of $50,000, will be used for children up to 15 years of age.

VIRGINIA

Society News.—Drs. Chevalier Jackson and John A. Kolmer, Philadelphia, addressed the Roanoke Academy of Medicine recently on "Diverticulum of the Hypopharynx" and "Infection, Immunity and Specific Treatment of Lobar Pneumonia" respectively.

Portrait of Dr. Flippin.—An oil painting of Dr. James Carroll Flippin, dean and professor of internal medicine, University of Virginia Department of Medicine, Charlottesville, has been presented to the university by the alumni, and the graduating class of 1938. The portrait was presented by Mr. James B. Black, president of the senior medical class. Dr. Flippin received the honorary degree of doctor of science from the university at its commencement exercises June 7.

Personal.—Dr. Harold W. Kinderman, Wicomico Church, retired in 1936 from the U. S. Army Medical Corps, has been appointed superintendent of Dixie Hospital, Hampton.——Dr. Ennion S. Williams, Richmond, was recently appointed medical director of the Life Insurance Company of Virginia, succeeding the late Dr. Charles L. Rudasill.——Alton D. Brashear Jr., D.D.S., instructor in anatomy at Louisiana State University Medical Center, New Orleans, has been appointed an assistant professor of anatomy at the Medical College of Virginia.——Dr. Charles L. Savage, Charlottesville, recently director of the health unit for Tazewell, Russell and Buchanan counties, has been appointed director of the Hanover County health unit with headquarters in Ashland.

WEST VIRGINIA

Obstetric Pilgrimage.—The annual pilgrimage of the West Virginia Obstetrical and Gynecological Society to a recognized medical center was recently held in Cleveland. One day of specialized clinics was spent at each of the following: Maternity and St. Luke's hospitals and the Cleveland Clinic. The next session of the society, its fourth, will probably be held in either Cincinnati or Pittsburgh.

State Medical Meeting at White Sulphur Springs.—The seventy-first annual meeting of the West Virginia State Medical Association will be held in White Sulphur Springs July 11-13 under the presidency of Dr. Charles W. Waddell, Fairmont. Guest speakers will be:

Dr. Horace M. Korns, Iowa City, The Nature and Manifestations of Congestive Heart Failure.
Dr. Waltman Walters, Rochester, Minn., Hyperfunctioning Lesions of the Ductless Glands.
Dr. Louis H. Clerf, Philadelphia, Pulmonary Suppuration.
Dr. John C. Gittings, Philadelphia, Nonspecific Lung Infections.
Dr. Gordon F. McKim, Cincinnati, Nephroptosis.
Dr. Henry S. Ruth, Philadelphia, Advantages Offered by an Organized Anesthetic Service.
Dr. Edward L. Compere, Chicago, Errors in Diagnosis or Treatment for Low Back Pain.
Dr. Nicholson J. Eastman, Baltimore, Pyelitis in Pregnancy.
Dr. Irvin Abell, Louisville, Ky., President of the American Medical Association, Surgical Treatment of Peptic Ulcer.

Dr. Cecil B. Pride, Morgantown, will deliver the oration on surgery on "Injuries of the Knee Joint," and Dr. Charles B. Chapman, Welch, the oration on medicine on "Human Blood

as a Therapeutic Agent." The West Virginia Industrial Physicians and Surgeons Association will meet Sunday evening July 10 with Dr. George H. Gehrmann, Wilmington, Del., as the guest speaker on "Industrial Medicine and Toxicology." The West Virginia Heart Association will meet Monday afternoon July 11 with Dr. Korns as the guest speaker on "The Effect of Pulmonary Emphysema on the Heart." The West Virginia Obstetrical and Gynecological Society will hold its annual meeting Thursday with Dr. Eastman as the guest speaker on "Pregnancy and Labor in the Bicornate Uterus." The annual convention banquet will be Wednesday evening.

Graduate Courses in Obstetrics and Pediatrics.—The West Virginia State Medical Association is sponsoring refresher courses in obstetrics and pediatrics to begin July 18 in two circuits. The courses will be given one day each week in each town for five consecutive weeks. The circuit in the northern part of the state will include the towns of Martinsburg, Keyser, New Martinsville, Weston and Fairmont; the southern circuit will consist of Logan, Welch, Beckley, Ronceverte and Fayette. Drs. Louis H. Douglass and Thomas Campbell Goodwin, Baltimore, will lecture on obstetrics and pediatrics, respectively, for the northern group; Drs. William F. Mengert, Iowa City, on obstetrics, and Lee Palmer, Louisville, Ky., on pediatrics in the southern towns. During the past two years these courses have been sponsored by the state health department.

GENERAL

Examination in Ophthalmology Postponed.—The American Board of Ophthalmology announces that the examination previously scheduled for November 15 at Oklahoma City has been canceled. Examinations are scheduled for New York October 7 and Washington, D. C., October 8.

Research Fellowships Available. — The Finney-Howell Research Foundation, Inc., Baltimore, announces that applications for fellowships next year must be in the hands of the foundation by Jan. 1, 1939. The appointments will be made the following March. Dr. William A. Fisher, 1211 Cathedral Street, Baltimore, is secretary of the foundation.

Refresher Course in Physical Therapy.—Didactic and clinical lectures, round table conferences, clinics and technical demonstrations will make up a course in physical therapy to be given before the annual session of the American Congress of Physical Therapy in Chicago September 7-10. Fundamentals will be reviewed but emphasis will be laid on the newer developments, according to the *Archives of Physical Therapy*. Fellows of the congress will be admitted to the course for a fee of $20; for others the tuition charge will be $25. Further information may be obtained from the American Congress of Physical Therapy, 30 North Michigan Avenue, Chicago.

Fewer Automobile Fatalities.—According to the National Safety Council, in the first four months of 1938 there were 2,060 fewer traffic deaths than in the corresponding months of 1937, a 19 per cent reduction. The North Central states showed the greatest improvement with a drop of 25 per cent; the South Atlantic states had a reduction of 14 per cent, South Central states 10 per cent and Pacific Coast states 11 per cent. The Rocky Mountain states reported an increase of 13 per cent. Of forty-two states reporting for either three or four months of both this year and last, twenty-eight showed decreases or no change. Oregon led the list with a drop of 40 per cent. Michigan was second with 39 per cent.

Society News.—Dr. Louise C. Eisenhardt, New Haven, was elected president of the Harvey Cushing Society at its seventh annual meeting in Memphis, Tenn., April 21-23; Dr. Frank R. Teachenor, Kansas City, Mo., is vice president, and Dr. William J. German Jr., New Haven, secretary.——The Western Institute for Hospital Administrators will be held at Stanford University, Calif., August 8-19; the institute is sponsored by the American College of Hospital Administrators, the Association of Western Hospitals and the Association of California Hospitals, jointly with the university. Mornings will be devoted to lectures, afternoons to field trips to hospitals and evenings to panel discussions.

Men Chief Victims of Fatal Home Accidents.—A recent study of mortality among industrial policyholders of the Metropolitan Life Insurance Company revealed that fatal accidents in the home were one and one half times as frequent among men as among women in the range 15 to 64 years. Death records show that falls off roofs, ladders, porches and balconies were much more frequent among men, as were falls down stairs. Deaths from poisonous gas were three times as frequent among men. Illuminating gas was the lethal agency involved in three fifths of the deaths and automobile carbon monoxide gas in one fourth of the deaths among men. Firearms were the third most important cause of mortality among men. Deaths involving the cleaning or careless handling of loaded guns caused 1.2 deaths per hundred thousand male policyholders but only 0.2 among women. Accidental burns, exclusive of those sustained in conflagrations, were the only type of home accident in which more women than men were injured fatally.

Changes in Status of Licensure.—The Oregon State Board of Medical Examiners reports the following:

Dr. Joseph A. Wonderlick, Salem, license revoked April 6 for unprofessional and unlawful conduct.

The Colorado State Board of Medical Examiners reports:

Dr. Taber A. Darling, Fort Lupton, license restored April 5.

The State Medical Board of Ohio took the following action at a meeting April 5:

Dr. William E. Leever, Cincinnati, license suspended one year for violation of the Harrison Narcotic Act.

Dr. Mounce E. Byrd, Burbank, license suspended on his conviction of criminal abortion, for the period of his incarceration.

The Board of Medical Examiners of Maryland, Baltimore, announced the following action:

Dr. Robert Xavier Giering, Baltimore, license revoked March 4 because he was twice convicted of practicing criminal abortion and of having been found guilty of using the mails to obtain money under false pretenses.

Dr. Allan Hamilton Uhler, Baltimore, license revoked March 4 on account of his having been convicted of the larceny of two microscopes and of having used the mails to defraud.

The Massachusetts Department of Registration in Medicine announces the following action:

Dr. Solomon Gobert, East Boston, Mass., license suspended for six months, March 17, for testimony in court.

CANADA

Society News. — Drs. Gordon Gordon-Taylor and John Beattie, both of London, England, addressed the Academy of Medicine of Toronto April 5 on "Injuries of the Abdomen" and "Neurogenic Factors in the Control of Gastric Motility, Secretion and Ulceration" respectively.——Dr. Philip A. Clyde Cousland, Victoria, addressed the Victoria Medical Society April 7 on allergy.

Rural Health Contest Winner. — The first rural health conservation contest in Canada, held during the past year by the Canadian Public Health Association in cooperation with the American Public Health Association, was won by the St. Jean-Iberville-Laprairie-Napierville health unit, St. Jean, Que. Dr. Jean H. Maynard is the health officer. The U. S. Chamber of Commerce sponsored the contest and funds were supplied by the W. K. Kellogg Foundation. A plaque was to be awarded to the winning unit at the annual meeting of the Canadian Public Health Association in Halifax June 20-22.

FOREIGN

Personal.—Dr. I. Snapper, professor of pharmacology and pathology in the University of Amsterdam and director of the clinic for internal medicine in the Wilhelmina Hospital since 1919, has been appointed professor of medicine at Peiping Union Medical College, Peiping, China.

The Lister Medal.—Dr. René Leriche, professor of clinical surgery, University of Strasbourg, will receive the Lister Medal for 1939 and will deliver the Lister Memorial Lecture in 1939, according to *Science*. This is the sixth occasion of the award, which is made by a committee representing the Royal Society, the Royal College of Surgeons of England, the Royal College of Surgeons in Ireland, and the universities of Edinburgh and Glasgow. The medal is given in recognition of distinguished contributions to surgical science.

Congress on Tropical Medicine and Malaria. — The third United International Congress of Tropical Medicine and Malaria will be held in Amsterdam September 24 to October 1 under the auspices of the Netherlands Society of Tropical Medicine. Dr. G. Gryns is the general president and Dr. N. H. Swellengrebel the president of the malaria congress. The general secretary is Dr. Ch. W. F. Winckel, Institute of Tropical Hygiene, Mauritskade 57, Amsterdam O. The secretary of the committee for the United States is E. Harold Hinman, Ph.D., Wilson Dam, Ala.

Society News. — The International Federation for Documentation will hold its fourteenth International Conference on Documentation at Lady Margaret Hall, Oxford, England, September 21-26, under the presidency of Sir William Bragg.—— The fourth annual Congress of Electroradiologists of the French Language will be held in Paris October 5-8. At the opening session Prof. Frederic Joliot-Curie will speak on "Neutrons and Artificial Radio-Elements; Biologic Application, Therapeutic Hypotheses." Information may be obtained from Dr. Delherm, president of the congress, 1 Rue Las Cases, Paris 7.

Foreign Letters

LONDON

(From Our Regular Correspondent)

June 4, 1938.

The Radiotherapy of Brain Tumors

At the Society of Radiotherapists, W. C. Northfield opened a discussion on benign brain tumor, which he said comprised not only encapsulated ones, such as meningoma and acoustic neurinoma, but certain slowly growing gliomas. On the other hand, the spongioblastoma and the medulloblastoma were intensely malignant, and with these hopeless tumors the neurosurgeon turned to the radiotherapist. Other tumors might be considered malignant because of their position in the brain though histologically fairly benign. These included diffuse astrocytoma of the pons, speech centers or basal ganglions. For such tumors surgical extirpation was not feasible. In the choice of case for radiotherapy there was the difficulty of being certain of the diagnosis. As a rule it was desirable to precede irradiation by an operation, to avoid the risk of leaving a benign tumor, to relieve the increased intracranial pressure and to secure a histologic diagnosis.

Robert McWhirter described his technic. The location and estimated area of the tumor were indicated by the neurosurgeon on roentgenograms of the skull in two planes, often on the ventriculograms. With this guide he made a chart of the portals of entry and the directions of the exposures. To prevent unpleasant reactions, the initial doses were much smaller than the subsequent ones. He was optimistic about the results of radiotherapy in ameliorating the general symptoms and improving the neurologic status. There was general agreement as to the radiosensitivity of such gliomas as medulloblastoma, spongioblastoma multiforme and certain types of astrocytoma. In a few cases inoperable meningoma had also proved responsive. In cases of pituitary adenoma headaches were relieved and vision and endocrine disturbances were improved. With acromegaly there was improvement even in the face, so that new dentures were necessary, and in the extremities, so that smaller shoes could be worn. A note of warning was sounded as to the susceptibility of healthy brain tissue to irradiation. In patients who eventually died, softening of the white matter had been found in areas of the brain in the line of treatment. Radiotherapy of brain tumors was less advanced than radiotherapy elsewhere, and the technic was in need of development.

Air Raid Precautions

In the House of Commons, the home secretary, Sir Samuel Hoare, said that we were getting near the half-way mark of the million volunteers for defense against air raids for which he appealed two months ago. First aid and antigas training had been given to 126,000 men and women, and in addition 11,000 physicians, 1,300 dentists and 22,000 nurses had passed through the air raids precautions course. He had already issued to the local authorities 300,000 gas masks for training. A survey has been made of the hospital accommodations of the country for dealing with casualties. It has been suggested that the casualties should be taken as quickly as possible outside the area of London attacks, as these might be so formidable that it would be difficult for the hospitals to carry on, and that casualty hospitals should be formed on the periphery of London and victims moved from them into the country. The government has formed a committee consisting of hospital experts, the director of medical services in the war office and the principal medical officer of the London County Council to give advice. Directions are being issued to the hospitals as to the precautions they should take against air raids. Plans for the evacuation of the population from London and particularly for the evacuation of children are being considered. Another danger from air attack is interference with our immense sea-borne food supply. Plans for diverting shipping from the harbors of the east coast to the less dangerous ones on the west coast have been drawn up. Another precaution, adopted for the first time in this country, is the purchase by the government of large supplies of food for storage, some of which have already been delivered. The supplies consist of three commodities which can be stored for a long time without deterioration—wheat, sugar and whale oil. The wheat will be stored, so far as possible, in ports on the west coast. Whale oil was selected as supplying one of our greatest necessities—fat. It is of all oils the easiest to store and will keep for years without deterioration. It is a basic component of margarin.

Austrian Medical Refugees

The spread of political persecution from Germany to Austria has exercised the profession as to the prospects of their Austrian colleagues. Sigmund Freud has arrived in London from Vienna to take up residence with his son who lives here. He has been given a permanent permit by the government. He recently celebrated his eighty-second birthday, and his intention is to spend the remainder of his days here in study and research. He was met at the station by Dr. Ernest Jones, an eminent pupil, who drove him to his destination.

Dr. J. A. Ryle, professor of medicine in the University of Cambridge, has written to the medical press on assistance to Austrian medical students. A letter has been circulated to the deans of the medical schools of the British Isles pointing out that, while there is general agreement that there is no room for any great increase in the number of foreign physicians allowed to practice in this country, and that the best we can do is to offer asylum to individuals, the question of the medical student seems to be in a different category. He wonders whether we might not make some effort to provide opportunities for a limited number of Austrian medical students in the British Isles. The London Hospital has undertaken to take one student free of charge for the whole of his medical curriculum, on the understanding that his board and lodging can be privately provided. Professor Ryle suggests that each medical school should undertake the free education of one student on these conditions. By the time he is qualified, the student would be eligible for naturalization.

PARIS

(From Our Regular Correspondent)

June 4, 1938.

Present Status of Vaccination Against Tetanus

The question of whether antitetanus vaccination is effective has been the subject of a number of papers read at the Académie de chirurgie of Paris during the last two years. Prof. G. Ramon of the Pasteur Institute of Paris read a paper at the May 18 meeting of the Académie de chirurgie, in which the comparative efficacy of antitetanus serum and tetanus toxoid was reviewed. Although the ability of the serum to prevent this type of infection can no longer be questioned, there are limitations to its efficacy. The passive immunity following the injection of antitetanus serum takes place almost immediately but is of short duration. "Serum sickness" follows the injection of the serum. That death can follow an injection cannot be denied. Inability to work because of a comparatively insignificant injury may be prolonged as the result of serum sequels. On the other hand, one must bear in mind that tetanus is not uncommon as a complication of an insignificant injury or of wounds with which its occurrence is not to be expected. It is evident that the routine use of the antitetanus serum presents a difficult problem, whereas vaccination with the tetanus toxoid does not expose the worker to any local or general reactions.

Tetanus toxoid does not immunize the subject until after a certain interval, but the immunity is permanent. The most important factor is that the toxoid increases the resistance of the patient and its administration is followed by a special ability of the organism to react when the injection is repeated. Rapid progress has been made recently in bestowing immunity on a large percentage of vaccinated persons. Transitory passive immunity follows repeated injections of the serum, but successive injections of the toxoid at more or less prolonged intervals create an ever increasing active immunity which is permanent. More than a million persons have been vaccinated with the toxoid in France, but not a single case of tetanus has been reported. The use of the toxoid in the prevention of tetanus deserves to be generally adopted. When the development of tetanus is to be feared, both the serum and the toxoid should be given. For children the injection of 3,000 units of serum is indicated, while for adults it is advisable to inject from 10,000 to 20,000 units. Fifteen minutes later 1 cc. of the toxoid should be injected, and in three weeks there should be a second injection, of 2 cc. of the toxoid. If possible a third and a fourth injection of the same dose of the toxoid should follow. If the injured person has previously been vaccinated, a single injection of 2 cc. of the toxoid suffices. If there is any doubt about a previous vaccination or the patient has lost a great deal of the antitoxin in the blood because of a severe hemorrhage, it is better to give also an injection of the serum. Vaccination by means of the toxoid calls for three injections and should be used as a matter of routine for all persons whose work exposes them to tetanus infection. For this reason the use of the toxoid is now obligatory for all soldiers. In the discussion, Dr. Louis Bazy stated that the principal arguments in favor of the toxoid are that it can be relied on to confer immunity in a far larger percentage of cases and that the immunity is not temporary, as is that produced by serum used preventively.

Prophylaxis Against Undulant Fever in France

At the May 17 meeting of the Académie de médecine of Paris a series of investigations on undulant fever were reported by Professor Lisbonne of Montpellier, in southwestern France. The research work was aided by the Rockefeller Foundation, which has established a center at Montpellier for this purpose. In 1924 the disease existed in only seventeen of the ninety departments of France. In 1938 this number has risen to seventy-six, the disease in all cases being confirmed bacteriologically. Infection of human beings by Brucella abortus bovis is not rare, and the center at Montpellier has found the disease in seventy cases from departments in northern, eastern and central France. In the South and Southwest, only Brucella melitensis has been observed in blood cultures. In three departments, in northeastern, in eastern and in southeastern France, bovine brucellosis due to Brucella melitensis has been found. Direct infection of human beings ranks first as a mode of transmission, whereas infection by way of the alimentary tract ranks second. The lesser number of cases of the latter mode of transmission is the result of sterilization of contaminated milk, even in rural communities. Contact infection has been found to occur five times oftener than infection by ingestion of milk, cheese and other dairy products. General cleanliness, especially proper care of the hands, is less important in the prevention of infection due to Brucella than combating the disease at its source, that is, killing infected animals. The use of living vaccines for prophylactic purposes carries with it the danger of elimination of the bacteria and infection of healthy animals in contact with the vaccinated ones. Also there have been reports of infection of veterinary surgeons in handling living vaccines. Dead vaccines have not been found to be of any value. The ideal method would be to utilize nonvirulent bacteria. The Montpellier center, by combining injections of a nonvirulent strain with injections of a glucidolipoid antigen of Brucella melitensis, has succeeded in successfully vaccinating guinea pigs in the majority of its experiments. In the discussion, Professor Lemierre of Paris stated that the cutaneous route of inoculation had been observed more frequently than any other at the contagious disease hospital here.

Action of Sulfanilamide on Experimental Pneumococcic Infections

At the May 24 meeting of the Académie de médecine of Paris, an extensive experimental study on the action of sulfanilamide was presented by Prof. Constantin Levaditi of the Pasteur Institute and his co-workers Vaisman and Krassnoff. In their earlier investigations the streptococcus was employed, and it was found that the action of sulfanilamide and similar preparations is proportional to the potential defensive powers of the organism. If this defense is lacking the therapeutic action of the drug will be inadequate. Complete sterilization can be expected only when both the index of the animal's resistance and the capsule formation—inhibiting and antitoxic properties of the newer drugs are at their maximum. In the present study the pneumococcus was selected because it possesses a tendency to capsule formation as a means of defense against the action of phagocytes and drugs which is much more marked than the streptococcus. Experiments were undertaken on mice. Three strains of pneumococci were chosen, a very virulent strain, a less virulent strain and a strain which was nonpathogenic and without a capsule. The drugs employed were 4-nitro-4′ acetylaminodiphenylsulfoxide and aurodetoxin, which according to the Gehes Codex is a compound of gold and a sulfur-rich keratin preparation of high molecular weight containing 12 per cent of gold (Vaisman). The cultures were injected intraperitoneally and the mice killed at varying intervals. From their first series of experiments, the authors concluded that preexisting encapsulation greatly increases the pathogenic action of the pneumococci. The capsule acts like an impermeable covering, which protects the pneumococci from being ingested by the phagocytes and favors multiplication of the pneumococci in the blood and tissues. The capsule-forming property of the pneumococcus plays the most important part in determining its virulence. In studying the mechanism of defense of the infected mice against nonvirulent and nonencapsulated pneumococci, it was found that specific defense of the blood serum against distinctly pathogenic and capsule-forming pneumococci, on the one hand, and phagocytosis, with its concomitant opsonic phenomena, on the other hand, have the principal roles. After this work had been done, the question was studied as to whether sulfanilamide and similar drugs have a bactericidal or bacteriostatic action.

The final conclusions of this investigation are as follows: The virulence of the pneumococcus is related more directly to the potential ability of this organism to form a capsule than to the phagocytic properties of the leukocytes. A strain of pneumococcus is pathogenic because it finds the materials in the body of the host which permit it to form a capsule. The various sulfur-containing newer drugs which are therapeutically active cause the pneumococcus to be more readily surrounded by the phagocytes, because these drugs act by creating an unfavorable medium for the formation of capsules by the pneumococci. This renders the bacteria an easy prey for the phagocytes. As a result of their previous studies of the action of sulfanilamide and similar drugs on the streptococcus and of their present investigation, Levaditi and his co-workers maintain that the drugs act (*a*) by being altered within the body, (*b*) by the ability of the body to regulate the rhythm of elimination of the drug, (*c*) by inhibiting multiplication of the bacteria, (*d*) by preventing capsule formation and (*e*) by aiding phagocytosis in destroying the bacteria temporarily or permanently.

BERLIN

(From Our Regular Correspondent)

May 10, 1938.

New Developments in the Problems of Heredity

There has been of late a reduction in the number of new publications and regulations in the field of genetics. Nevertheless, several new and interesting pronouncements and decisions on the problem of heredity have been made. Genetic-biologic examination was employed as a means of proof in a recent case of the disputed paternity of a child. The Reichsgericht, as supreme German tribunal, in a recent opinion states that genetic examination can be of decisive importance in cases of this sort and should be employed in all doubtful cases. In this particular case the blood type test had been without result and a genetic test had been resorted to as a further source of evidence: "Since the test is undoubtedly a proper source of evidence; since it is particularly applicable in the present case; since the result of the test should decide the paternity of the child." On the other hand, according to one high juridical authority the genetic test should not be evaluated as an exact scientific source of evidence in favor of or against an alleged progenitor, and its accuracy is not comparable to that of the blood type test. The genetic test, however, may furnish data which vary in significance according to other circumstances of a given case. It may frequently be useful as a secondary, supplementary test. The genetic test is based on a similarity of certain hereditary external characteristics in father and child. Comparative studies are made, for example, of the hair of the head, eyebrows, eyelashes, palpebral fissures, color of eyes, nose, possible harelip or cleft palate, fissura oris, chin, ears, pattern of papillary ridges on the finger pads, palmar and plantar surfaces, color of skin, form of clavicle and form of vertebral column.

Dr. Gross, director of the bureau of racial eugenic policy of the Nazi party, recently discussed the problem of choice of a marriage partner by siblings of congenitally diseased persons. In many circles it is feared that the determination of hereditary disease imposes on the siblings of the affected person at least a moral obligation not to marry. This apprehension is baseless. Usually a hereditary disease will be present in one member of a group of siblings, whereas the others show no signs of the disorder and are never found to have transmitted a predisposition to their offspring. Sterilization of the diseased person should by no means be considered a reflection on the healthy siblings. The marriage of the siblings of the sick person should of course take place only after thoroughgoing medical examination and certification of genetic fitness.

Blood Typing as Means of Forensic Proof

The national government has just issued a new law with regard to cases of doubtful paternity, which represents a practical application of the Nazi concept of genetics and race. Of particular interest to the medical profession is the stipulation that in such cases the court may order both blood type and genetic tests. Heretofore judicial authority to order tests of this sort was open to question. The new law makes no pronouncement on the evaluation of the testimony of the child's mother; accordingly such testimony remains the first consideration. It follows then that these tests will be resorted to only if the mother's testimony is unsatisfactory; for example, if she is deemed untrustworthy. The blood test thus becomes a secondary consideration, the genetic test a tertiary. The courts are now provided with clear rules of legal procedure with regard to this problem.

Legitimate and Illegitimate Children

In the year 1936 about 1,210,000 babies were born in wedlock; namely, about 14,700 more than in 1935, whereas the number of those born out of wedlock increased by only 215. Of infants born in the year 1936, 7.8 per cent were illegitimate, as against 7.9 per cent in 1935. The proportion of infants born out of wedlock has tended to decrease constantly and substantially since 1930; this decline continued in 1936. During the years from 1926 to 1930, 12.3 per cent of newly born babies were illegitimate. The marked decrease in the proportion of illegitimate babies was at first due to the fact that women born during the war period of low birth rate, from 1915 to 1919, had reached the age levels at which the bearing of illegitimate children is most frequent. Since 1933 the further recession in the number of babies born out of wedlock has been due to the increase in number of marriages, the increased fertility of marriages and the institution of government subsidies to couples contemplating marriage. In 1936 an especially noteworthy increase was observed in the number of children born to those couples who had married before 1933 and whose fecundity had been markedly on the decrease because of unsettled general conditions prior to the latter year. Marriages contracted before 1933, especially those contracted in the years from 1920 to 1926, in 1936 still showed, after a duration of from ten to sixteen years, an increase in births of approximately 3 to 8 per cent over the figure for 1935, which figure represented an increase of from 30 to 40 per cent over that for 1933. In the year 1937 the number of babies born in wedlock amounted, according to preliminary figures, to about 1,270,000; namely, 314,000 more than in 1933. In the four years from 1934 to 1937 the number of legitimate children born within the German reich, including the Saar district, exceeded by 1,166,000 the number who would have been born had the extremely low rate of a year such as 1933 continued. Of the foregoing number 1,130,000 were born alive. This increase in births permits the assumption that not only among younger couples but among older couples as well the desire for children is stronger than in the past.

Dr. Guenter K. F. Schultze, senior physician of the Women's Hospital of Berlin University, has made a comparative clinical study of legitimate and illegitimate births. His material consisted of 15,000 married primiparas and 12,000 unmarried primiparas. It was observed that with regard to several puerperal complications the unmarried women fared better than the married women. Premature rupture of the fetal membranes and eclampsia were both much less frequent among the unmarried than among the married women. Surgical interventions were less frequently indicated for the unmarried mother. Rupture of the peritoneum, as well as transverse presentation, was, on the contrary, more common among the unmarried women. In the war years, when wives were separated from their husbands, premature rupture of the membranes was of about equal frequency in the two groups of women studied. This shows with all the clarity of an experiment that coitus during pregnancy was the most common cause of premature rupture of the membranes among women whose husbands were called away to war. Eclampsia was due to insufficient nutrition during pregnancy, as well as to overwork and excess of bodily movement. The conditions under which many unmarried woman live during pregnancy may conduce to eclampsia. With regard to the incidence of surgical operations, the unmarried primiparas were substantially better off than the married women. Most noteworthy was the great difference with respect to the incidence of deliveries in which forceps had to be employed. Comparison of the corresponding age groups of married and of unmarried primiparas plainly showed the unmarried mothers to be more liable to rupture of the peritoneum. According to statistics that cover several decades, the number of stillborn illegitimate infants is about 1 to 2 per cent greater than the number of stillborn legitimate infants. The high proportion of stillbirths among unmarried women recorded in the national statistics is not based on an especially greater frequency of puerperal complications; the data show on the contrary that in many important respects the unmarried mothers fare better than the married. The difference lies in the obstetric treatment of the homeless unmarried mother. The proportion of premature births

is twice as great among unmarried women as among married women. Accordingly, premature birth is the most important aspect of the whole problem of illegitimacy from the obstetric point of view. In addition, the illegitimate child is likely to present characteristic developmental deficiencies which have begun during the intra-uterine life; the smaller neonatal weight of illegitimate infants is one manifestation of their debility. It is indicated on the basis of the statistical data that the unmarried gravida ought to receive home care during the final months of pregnancy and should be hospitalized during confinement.

Campaign Against Misuse of Alcohol

An agreement has recently been effected between the German wine growers and the national fuehrer of physicians on the following principles relative to the use and abuse of alcohol: The campaign against drunkenness is a part of German public health policy. There is no objection to the use of alcoholic beverages but only to intemperance. Broadly speaking, every adult citizen may indulge liberally, moderately or not at all, as he chooses. On the other hand, abstinence is demanded of children under the age of 17, women during pregnancy and lactation, persons whose health is endangered by alcohol and, finally, persons whose occupations entail a particularly great responsibility, drivers of motor vehicles, for example, both before and during driving. In addition, the production, marketing and wide distribution of new sweet wines are recommended.

ITALY

(From Our Regular Correspondent)

May 28, 1938.

National Congress on Tuberculosis

The fourth national congress on tuberculosis was held at Tripoli; Prof. Raffaele Paolucci of the University of Bologna presided. The first theme concerned the prophylaxis and treatment of tuberculosis. Professor Morelli of Rome, director of a large sanatorium, said that hospitalization of the tuberculous patient is an axiom in prophylaxis. Early diagnosis in a high percentage of cases is another necessity; it is above all the duty of the antituberculosis dispensaries, which, the author suggested, ought to be supplemented by mobile municipal clinics which would collaborate as much as possible with the outpatient clinics of the university and other hospitals.

At the second session the topic tuberculous bacillemia was developed by Professor Daddi of the Istituto Forlanini of Rome. He emphasized the inadequacy of testing with Loewenstein's culture medium, which method, although much used, contains sources of error. He criticized the composition of the culture medium and the preparatory treatment of the blood (according to Rondoni and Petragnani the blood ought not necessarily to be deprived of hemoglobin). Loewenstein advises centrifugation of the blood in from 1,000 to 1,500 revolutions, whereas Besta has demonstrated the value of centrifugation of the blood at high velocity in short test tubes. Professor Daddi discussed the destiny of bacilli that are in the blood, as well as the formation of hematogenous metastases. The author cited Professor Morelli's concept of the filtering action of the lungs as an important factor in the arrest of bacterial emboli. Daddi's microscopic and bacteriologic investigations carried on in collaboration with Panà on cadavers of victims of phthisis showed that tubercle bacilli were present in the livers of 70 per cent and in the thoracic lymph nodes of 94 per cent. The spleens of 74 per cent were shown to be diseased by bacteriologic tests and the spleens of 30 per cent by microscopic tests. In many cases the bacillemia had been unaccompanied by any clinical manifestations. Professors Mazzetti, Besta and Barchi objected to the method and conclusions of Loewenstein. Loewenstein considers bacillemia a beneficent phenomenon even with those forms of pulmonary tuberculosis which are ordinarily considered of hematogenous origin and even after injections of epinephrine. This is not at variance with the clinical and anatomic data which demonstrate the frequency of the hematic genesis of tuberculosis in the adult but only confirms the fact that it is difficult to detect the passage of the bacillus into the circulation. Such research is of scant clinical importance in the diagnosis and prognosis of pulmonary tuberculosis.

At the third session the theme prophylaxis against prenatal tuberculosis was discussed by Prof. Carlo Vercesi. In discussing the tuberculous gravida, he reiterated what he had advanced in previous writings; namely, that pregnancy does not of itself contain any constant factors through which tuberculosis may be reactivated or aggravated. On the other hand, during the period of gestation all modern procedures of tuberculosis therapy can be advantageously employed. The obstetric care of the tuberculous gravida should be conservative; rarely is interruption of pregnancy indicated. The foregoing opinion is in accordance with that of the more authoritative obstetric clinicians both in Italy and abroad. With regard to the intrauterine processes, studies have tended to minimize the importance of contagion from passage of filtrable virus. Although the development of the majority of babies of tuberculous mothers is below normal, the incidence of specific lesions is no greater than among other infants, provided they are immediately removed from contact with the tuberculous mother and other infected persons. Among the safeguards recommended for the tuberculous gravida the author urged first, hospitalization in an institution equipped to care for both women in childbirth and tuberculous patients. He urged the establishment of obstetric units in the larger sanatoriums and of special units for the care of tuberculous patients in other hospitals. Such combinations of facilities would make possible better collaboration between obstetrician and phthisiologist; this in turn would lead to greater availability of modern therapeutic methods, including collapse therapy. Prof. Rocco Jemma called the attention of the congress to the problem of tuberculosis in the nursling. The agencies for the treatment of tuberculosis in childhood should be welded into one strongly organized front. He mentioned the little recognized fact that servants and elderly relatives may be important carriers of infection. He attested the value of antituberculosis vaccination of children with Maragliano's serum or Petragnani's tuberculin, supplemented in some cases by administration of BCG vaccine. Surgeon Major Professor de Paoli and Prof. Alberto Ciotola, director of the Colonial Hospital, Tripoli, reported on the extent of tuberculosis in Tripolitania. The diffusion of tuberculosis in North Africa corresponds closely to the urbanization of the population. It was the opinion of the discussers that present data on tuberculosis in the colonies are inadequate. It was accordingly proposed that the next national antituberculosis congress take up as a principal topic tuberculosis in the African colonies.

Plastic Surgery

Before the Società di chirurgia plastica ed estetica, Professor Manna discounted the idea that plastic surgery and cosmetic surgery are two independent disciplines, the first appertaining to general surgery and the second being employed essentially by the luxury class. Manna believes that since plastics attempts the reconstruction of mutilated and deformed tissues, cosmetic surgery ought to be considered a special branch of plastics, having as its purpose the restoration of the cosmetic function of damaged tissues. Its objectives are then both social and humanitarian. The application of cosmetic surgery is difficult; often from fifteen to twenty interventions have to be performed on the same patient to effect gradual adaptation of the tissues to the new circumstances of topography, circulation and consistency. As to the legal responsibility of the surgeon when a cosmetic operation falls short of its objective, the author maintains that this problem can be solved by application of the forensic principles already applied to general surgery.

Malaria Research

The Istituto Italiano di malariologia sent out to Ethiopia a medical research mission composed of Professors Lega and Raffaele, Dr. Canalis and a preparator. After four months in the field the commission reported that malaria is prevalent in Ethiopia, even on the lofty plateau regions 2,000 meters above sea level. The benign tertian type predominates; it occurs in epidemics which last the greater part of a year. In the lowlands malaria is endemic but less so than in the intermediate highlands. In the lowlands Plasmodium vivax is more common than Plasmodium falciparum as the causal agent. Quartan malaria is rare; cases in which the disease was caused by Plasmodium ovale were not observed. A new species of Plasmodium falciparum was frequently observed; it is characterized by definite peculiarities, both morphologic (larger trophozoites and shorter and wider gametocytes) and biologic (precocious exflagellation of the male gametocytes, scant pathogenicity in Anopheles). Lega and Raffaele have named this well differentiated species "aethiopica." Anophelism is extremely common even at altitudes above 2,000 meters; e. g., at Addis Abeba (2,640 meters above sea level). Thirteen species of Anopheles were observed, among them Anopheles d'thali and Anopheles turkhudi, previously believed restricted to the eastern Mediterrenean region.

SWITZERLAND

(From Our Regular Correspondent)

May 6, 1938.

Case of Spontaneous Poliomyelitis in an Animal

The literature contains no report of spontaneous acute anterior poliomyelitis in an animal, and experimental inoculation has thus far succeeded only in apes. Therefore a case reported by Dr. E. Frauchiger at Langenthal, canton of Berne, is of the utmost importance. A heifer aged 1½ years, of healthy stock, was observed one morning to present a slight dragging of the left hind leg; by evening both hind legs were involved. On the following morning she was no longer able to stand; the fore legs were still mobile, whereas the hind legs had become completely limp and paralyzed. On the fourth day after manifestation of the initial symptoms all four extremities were completely paralyzed, the respiration was labored and the animal became so distended and restless that it had to be destroyed. No similar sickness had been observed previously among the live stock of this particular farm, nor had any cases of poliomyelitis been reported among the children of the neighborhood. As usual in cases of poliomyelitis, the necropsy revealed no specific macroscopic changes except hyperemia. Microscopic observations, on the contrary, were extremely characteristic, most notably in the lumbosacral portions of the spinal cord. The changes were identical with those that have been recognized in human subjects, and particularly with the changes described by Dr. Walthard of the Berne Institute of Pathology during the epidemic of 1937. In fact, it was Walthard who established the similarity by comparative microscopic study of the tissues. The course and symptoms of the heifer's illness corresponded with the clinical picture of reported fatal cases of acute ascending paralysis in man. It was recognized that more cases of the acute ascending form were observed during the poliomyelitis epidemic of 1937 than during previous epidemics. The analogy of the clinical picture, however, tells nothing with regard to a similarity or dissimilarity of the causative agent. Dr. Frauchiger says that this, the first case of spontaneous poliomyelitis in an animal to be recognized, permits the anticipation of other instances in the future. Possible cases should be reported while the animal is yet alive, so that experimental immunologic studies of the brain and of the spinal cord can be made. Transmission of the infection from animal to man can no longer be rejected. Research on the inoculation of cattle should now be renewed. Descriptions in the literature of minor epidemics of poliomyelitis following ingestion of milk from a sick cow may be viewed in a new light. It may perhaps be useful to produce a heterologous immunizing serum from cattle, which would supplement Pettit's serum obtained from the horse. The virus of poliomyelitis may be modified in the direction of a virus fixe, in the pasteurian sense, and this principle as utilized in the study of rabies may be applied to poliomyelitis.

Epidemic of Poliomyelitis in a Regiment

The *Schweizerische medizinische Wochenschrift* recently published a report by Dr. Hans Stahel, regimental surgeon, on a singular epidemic of poliomyelitis. Within the short space of twelve days in July 1937, six of 930 soldiers came down with meningeal and myelitic symptoms, sixteen with purely meningeal manifestations and 108 with more or less marked catarrhal disturbances. Correct diagnosis was made almost immediately in the first case. The necessary procedures, including instructions to the men, were instituted. Virtually on the same day six other men reported sick. The clinical pictures were strikingly similar; there was obvious involvement of the nervous system. During the next few days the epidemic continued to spread, but now a surprising change in the character of the disorder became recognizable. The number of cases of neurologic involvement abruptly declined, whereas catarrh of the upper part of the respiratory tract and severer generalized symptoms came to the fore. Differential diagnosis between poliomyelitis and influenza became uncommonly difficult. Prominent in the clinical syndrome of poliomyelitis were malaise that had begun one or two days previously, persistent headache, sense of tension, stiffness of neck and back and localized myalgia. In most cases recovery took place without permanent sequels within a maximum of five weeks. The 108 cases of catarrhal disturbances (83 per cent of all observed cases) could be classified apparently as cases of abortive poliomyelitis. The opinion that the milder forms represented poliomyelitis rather than epidemic influenza was substantiated among other things by the fact that, although 5,000 other troops were stationed in the vicinity, no untoward rise in incidence of "army catarrh" took place. Moreover, patients with catarrhal poliomyelitis present certain peculiar characteristics: profuse perspiration, localized myalgias that did not shift from time to time (as happens in influenza) and a diphasic fever curve.

In contrast to other epidemiologic records, a morbidity of 14 per cent was reported; namely, a proportion 100 times greater than had ever been reported in the literature of poliomyelitis epidemics. Stahel believes that from his thoroughgoing epidemiologic studies of this highly homogeneous group a better insight into the true circumstances of epidemic poliomyelitis has been gained than would have been possible among the civilian population. Apparently one ought to regard involvement of the nervous system as a complication of the milder forms. Acute anterior poliomyelitis in all likelihood is not a distinct entity but a less common, more malignant form of the disease. From the standpoint of epidemiology the abortive forms of poliomyelitis must enlist greater interest. More energetic efforts should be made to quarantine all possible carriers of contagion; namely, all persons with catarrhal disturbances. Living quarters and other premises frequented by suspected carriers also should be placed under quarantine. In congested areas such measures cannot of course be very promising. During the epidemic in question, although the stricken regiment had certainly been in contact with the neighboring civil population, not a single authentic case of poliomyelitis could be determined among the latter.

The Nursing of Infants

A distinguished physician, Frau Dr. Imboden-Kaiser, has published in the *Schweizerische medizinische Wochenschrift* some data on the feeding of nurslings, a problem with which she has been concerned for decades. In the city of St. Gall thirty years and more ago, the mortality for nurslings was quite high;

in 1904 it was still 18 per cent. In the year 1910, of 2,000 babies in the first year of life, 13 per cent of those who had not been suckled and 6 per cent of those who had been suckled died. Dr. Imboden at that time considered these facts proof that Swiss women were tending to lose the habit of breast feeding. She campaigned for the longest possible period of lactation, with the result that at St. Gall the number of breast-fed infants increased (from 53.4 per cent of all babies in 1904 to 89.5 per cent in 1932), whereas the mortality for nurslings declined (from 18.2 per cent in 1904 to 2.9 per cent in 1932). Other influences were present, but the foregoing figures offer certain proof that the increase in natural breast feeding was the principal factor in the decline of the mortality. In 1914 the federal government established lactation prizes for mothers who suckled a baby for ten weeks. This measure gave a powerful impetus nationally to the breast feeding of infants. From 1918 an almost uninterrupted rise in the Swiss curve of lactation took place; the percentage rose from 46 in that year to 60 in 1931. A slow regression has since occurred; the rate in 1936 was 56.2 per cent. Further comprehensive surveys have disclosed that well conducted infant welfare agencies can be of tremendous assistance in raising the rate. In the year 1936, for example, of about 600 nurslings supervised by Dr. Imboden's own service, 98 per cent were breast fed. The collaboration of the lying-in hospitals is important. No "artificial" feeding of infants should be permitted. Difficulties of lactation or a true deficiency of secretion should be combated with the breast pump as well as with donations of pumped breast milk. A propaganda campaign should be carried on among lying-in women. An important influence inimical to breast feeding is the lavish advertising of the purveyors of baby foods.

Appointment to the Chair of Surgery at Berne

A succession of distinguished incumbents has held the chair of surgery at Berne University. It was long occupied by Professor Kocher, who in 1909 was awarded the Nobel prize for his research on the thyroid. Prof. Fritz de Quervain, who succeeded Kocher on the latter's death in 1917, has now reached the age of 70 and relinquished his post in compliance with the retirement rules. De Quervain, himself a pupil of Kocher, has carried on the development of the famous school of surgery. In 1909 he was called to the chair of surgery at Basel, but he returned to Berne as ordinarius in 1918. With his retirement medicine loses the active services of one of the greatest of Swiss surgeons. De Quervain's contributions to clinical knowledge of the disorders of the thyroid are of the first importance; his book on goiter, for example, has appeared in several languages. His principal literary contribution was his "Clinical Surgical Diagnosis," which has been translated into five languages and is considered a classic of surgery. As a personality de Quervain is highly respected and revered. He is an excellent lecturer whose utterances always seem well considered and pertinent. Prof. Hermann Matti has been appointed to succeed de Quervain. Matti also is a pupil of Kocher and a surgeon of distinction. He is 58 years old and has been director of the surgical section of a Berne hospital. He has done important work on the surgery of gastric carcinoma, on the physiology and pathology of the thymus and in other fields, but he is best known through his two volume work on fractures and their treatment.

Prof. Otto Naegeli is Dead

Prof. Otto Naegeli, for many years ordinarius in internal medicine at Zurich, died March 11, aged 67. He had relinquished his professional chair on account of serious illness two years ago. His passing removes a great personality and a renowned internist. After he had served as ordinarius at Tübingen, Germany, he returned in 1908 to Zurich University, where he had won his first academic laurels, to become professor of internal medicine and director of the medical clinic. Naegeli was the son of a physician whose reputation was international. Of his many innovations only a few can be mentioned here: the discovery of Naegeli's blood syndrome of pernicious anemia, recognition of the significance of study of the bone marrow, emphasis on the dynamic theory of the hematic processes, evaluation of the leukemias, description of the "hiatus leucaemicus," recognition of the constitutional aspect of chlorosis and discovery of the genetic factor in hemolytic icterus. Shortly before his death Naegeli completed a treatise on "Differential Diagnosis in Internal Medicine," which reflects his mastery of the field. His classic textbook "Blood Diseases and Blood Diagnosis" has appeared in five editions. The esteem in which Naegeli was held, in Switzerland and abroad, found expression in many different ways.

AUSTRALIA

(From Our Regular Correspondent)

May 10, 1938.

National Health and Pensions Insurance for Australia

More than one in every four persons in Australia will be brought into compulsory insurance by the national health and pensions insurance bill, now passing its second reading in the federal parliament. More than half the population, including wives and children, is affected indirectly. It is proposed to make the legislation operative from January 1939. The scheme provides guaranteed benefits for sickness and disablement, together with old age pensions for insured persons and pensions and allowances for their widows and orphans. It is based on compulsory contributions and will apply to all persons over 14 years of age under contract of service to do manual work, whatever the rate of pay, and to those doing nonmanual work provided their salary is not more than £365 per year. The ordinary total weekly contribution at the inception of the scheme will be 3 s. per week for an employed man and 2 s. for an employed woman, the contributions being shared equally by employer and employee. Contributions will be collected through the postoffice by the sale of insurance stamps; they will be supplemented by a substantial annual grant from the commonwealth treasury. The benefits provided are medical attendance and treatment; weekly cash payments during sickness and disablement; superannuation pensions for insured persons, life pensions for their widows and pensions for their orphans up to the age of 15 years; allowance for the dependent children under 15 of persons receiving pensions or sickness or disablement benefits. The medical benefit will be a general practitioner service. A complete range of drugs and medicines and certain medical and surgical appliances will be supplied on the prescription of the medical practitioner. The British Medical Association has agreed to a capitation fee of 11 s. per head per year for each insured person. To meet the special difficulties of country doctors, additional payments from the national insurance fund will be paid for mileage involved. One of the difficulties in Australia is to provide adequate medical service for areas with a sparse population and long distances between patients. The ultimate scheme will bring in bush hospitals and "flying" doctors.

All insured persons may select their own doctor and pharmacist. A weakness of the scheme lies in the restriction of medical benefits to the insured person. Administration of the scheme will be in the hands of approved societies. Friendly societies, trade unions, mutual life assurance societies and other existing provident and welfare organizations may register as approved societies so long as they conform to the requirements laid down in the bill. No society will be permitted to reject an applicant for admission on the ground of age, and an insured person will be entitled to sickness benefits when certified to be incapable of work up to the age at which the old age pension is payable. Continuity of insurance and benefits during prolonged sickness is provided for. The present

plan covers only employed persons. Small farmers, storekeepers and business men are not covered by the provisions of the bill, and it is considered that a careful exploration should be made of the subject of voluntary insurance of the self-employed person, with a view to extending to him, if at all possible, the benefits of the scheme.

Library Service for Surgeons

This year the Council of the Royal Australasian College of Surgeons will receive the endowment provided by the late Gordon Craig, a foundation fellow of the college, who was always anxious that one of its main functions should be the teaching of surgery in its highest forms, teaching which concerns not only the education of medical men who wish to become competent surgeons but the continued education of fellows. The council feels that there can be no better method of educating its fellows than by making available to them, by a library service in their widely separated homes throughout Australia and New Zealand, all the resources of modern surgical literature. The present library, attached to the college building in Melbourne, is fully stocked with current literature and contains a number of recent surgical works; these, with other books, reprints and periodicals, which will be added, will form the basis for the Gordon Craig Memorial Library. The council will design the library service so that it will come within the reach of every fellow of the college. As each research into literature on a special subject is made at the instance of a fellow, it will be filed for the benefit of future investigators of the same subject. The fellows will be kept in touch with incoming literature in several ways. The Council hopes thus to build up eventually the best reference library of surgical literature in the Southern hemisphere.

Limitation of Pharmacies

A feature of pharmaceutical legislation which is new to both Britain and America is now in operation in New Zealand. Under the pharmacy reorganization plan, provision is made for the ultimate limitation of pharmacies on a basis of population. Licenses will be issued on a definite system, and, as part of the new order, a compulsory uniform scale of charges for dispensed medicines will be brought into operation. Under the plan, pharmacies will be redistributed as far as possible, so as to give the public more adequate service.

Marriages

ERNEST LANGSDORFF NOONE, Drexel Hill, Pa., to Miss Joyce Mary Toulmin of Broughton, England, May 12.

EDWIN F. BAKER, Ashton, Ill., to Miss Mildred Louise Short of Chicago, at Tipton, Iowa, April 14.

EDWARD O. BAUER, Middletown, Ohio, to Miss Juanita Rae DeArmand of Rockford, in March.

GUSTAVUS CLAGGET BIRD JR., to Miss Mildred Alice Spotts, both of Philadelphia, April 2.

JAMES C. KELTON, Lascassas, Tenn., to Mrs. Anna Davis King of Nashville, March 2.

JAMES DUDLEY WHITEHEAD to Miss Maria Weaver, both of Lake City, S. C., in April.

RAYMOND ROBINSON CALLAWAY to Miss Sue Clay, both of Birmingham, Ala., June 9.

ELIAS S. FREY to Miss Elizabeth Belle Ferguson, both of Louisville, Ky., April 7.

EDWARD B. PITTS, Fairfield, Ala., to Miss Katherine Shaefer at Opelika, in April.

IRVING GREENE to Miss Terese Claire Schwarz, both of New York, April 30.

EDWIN M. STEVENSON to Miss Mabel Dean, both of Memphis, Tenn., April 5.

PAUL S. HANSEN to Miss Elizabeth Coit, both of Chicago, March 26.

Deaths

Lewis Webb Crigler ⊕ New York; Vanderbilt University School of Medicine, Nashville, Tenn., 1899; member of the American Academy of Ophthalmology and Oto-Laryngology; on the staffs of the New Rochelle (N. Y.) Hospital, Manhattan Eye, Ear and Throat Hospital, Horton Memorial Hospital, Middletown and the Peekskill (N. Y.) Hospital; aged 61; died, April 30, of heart disease.

Charles A. Bolich, Wadsworth, Ohio; Cleveland College of Physicians and Surgeons, Medical Department Ohio Wesleyan University, 1897; member of the Ohio State Medical Association; veteran of the Spanish-American War; past president of the Medina County Medical Society; on the staff of the Wadsworth Municipal Hospital; aged 65; died, April 23, in the People's Hospital, Akron, of chronic myocarditis.

Lewis Thomas Rhoads, Lincoln, Ill.; Hahnemann Medical College and Hospital, Chicago, 1902; member of the Illinois State Medical Society; past president of the Logan County Medical Society; served during the World War; formerly member of the school board; on the staffs of the Evangelical Deaconess Hospital and St. Clara's Hospital; aged 63; died, April 13, of chronic myocarditis.

Frank Lauman Watkins ⊕ Great Falls, Mont.; Ohio Medical University, Columbus, 1901; city and county health officer; formerly director of health education in the public schools of Tulsa, Okla.; at one time in charge of the Ohio Bureau of Vital Statistics and was affiliated with the Mississippi and Florida state boards of health; aged 58; died, April 8, in the Deaconess Hospital of lobar pneumonia.

John Mason Williams, Paris, Ky.; Louisville (Ky.) Medical College, 1893; member of the Kentucky State Medical Association; past president of the Bourbon County Medical Society; veteran of the Spanish-American War; formerly member of the city board of health; on the staff of the W. W. Massie Memorial Hospital; aged 67; died, March 12, in Lexington of coronary sclerosis.

Willard Curtis Proud ⊕ St. Joseph, Mo.; University Medical College of Kansas City, 1896; Rush Medical College, Chicago, 1900; member of the American Academy of Ophthalmology and Oto-Laryngology; fellow of the American College of Surgeons; on the staff of the Missouri Methodist Hospital; aged 64; died, April 29, of carcinoma of the colon.

Daniel Robins Saunders, Franklin, Ind.; Southwestern Homeopathic Medical College and Hospital, Louisville, Ky., 1897; member of the Indiana State Medical Association; past president and secretary of the Johnson County Medical Society; city and county health officer; aged 85; died, April 5, in the Methodist Hospital, Indianapolis.

Vance Rawson ⊕ Chicago; Hahnemann Medical College and Hospital, Chicago, 1901; formerly member of the school board in Danville, Ky.; served during the World War; at one time professor of internal medicine at his alma mater; on the staff of the Chicago Memorial Hospital; aged 61; died, April 19, of coronary thrombosis.

Theodore B. Templin, Gary, Ind.; Jefferson Medical College of Philadelphia, 1904; member of the Indiana State Medical Association; fellow of the American College of Surgeons; on the staffs of the Methodist Episcopal and St. Mary's Mercy hospitals; aged 58; died, April 26, of cerebral hemorrhage.

Harry Herbert Satchwell ⊕ Newark, N. J.; University and Bellevue Hospital Medical College, New York, 1904; member and past president of the state board of medical examiners; on the staffs of the Presbyterian and St. Michael's hospitals; aged 54; died, April 6, of hypertension and nephrosclerosis.

William B. Treadwell, Lufkin, Texas; Vanderbilt University School of Medicine, Nashville, Tenn., 1883; member of the State Medical Association of Texas; formerly on the staff of the Angelina County Hospital; aged 81; died, March 5, of arteriosclerotic heart disease.

Albert R. Wilson, Greensboro, N. C.; Jefferson Medical College of Philadelphia, 1882; member of the Medical Society of the State of North Carolina; past president of the Guilford County Medical Society; aged 78; died, April 22, of pernicious anemia and heart disease.

Orando S. Ritch, Brooklyn; New York Homeopathic Medical College, 1878; on the staffs of the Cumberland, Prospect Heights and Infants' hospitals; fellow of the American College of Surgeons; member of the board of trustees at his alma mater; aged 70; died, April 12.

John Price Brown, Toronto, Ont., Canada; M.B., University of Toronto Faculty of Medicine, 1868, and M.D., in 1869;

L.R.C.P., Edinburgh, Scotland, 1883; member of the American Laryngological, Rhinological and Otological Society; aged 93; died, April 3.

Charles Atwood Menefee ⊕ Covington, Ky.; Kentucky School of Medicine, Louisville, 1898; president of the Campbell-Kenton Counties Medical Society; on the staff of St. Elizabeth's Hospital; aged 69; died suddenly, April 18, of cerebral hemorrhage and hypertensive cardiovascular disease.

Ralston Lattimore, Savannah, Ga.; College of Physicians and Surgeons, Medical Department of Columbia College, New York, 1893; member of the Medical Association of Georgia; fellow of the American College of Physicians; aged 67; died, April 20, of arteriosclerosis and pneumonia.

Howard Patrick Doles, Mooringsport, La.; Tulane University of Louisiana Medical Department, New Orleans, 1912; served during the World War; aged 51; died, April 5, in the Highland Sanitarium, Shreveport, of general peritonitis and ruptured duodenal ulcer.

Charles Henry Field, Bradenton, Fla.; Georgia College of Eclectic Medicine and Surgery, Atlanta, 1891; member of the Florida Medical Association; formerly member of the state legislature; aged 68; died, April 18, of cerebral arteriosclerosis and coronary occlusion.

Henning F. B. Wiese ⊕ Minneapolis; Kongelige Frederiks Universitet Medisinske Fakultet, Oslo, Norway, 1915; fellow of the American College of Surgeons; on the staffs of the Asbury and Fairview hospitals; aged 48; died, April 29, of carcinoma of the stomach.

William Lee Gannaway, Abingdon, Va.; University of the South Medical Department, Sewanee, Tenn., 1900; member of the Medical Society of Virginia; aged 61; died, April 17, in the George Ben Johnston Memorial Hospital of coronary occlusion.

Henry Wilson Ring, New Haven, Conn.; Medical School of Maine, Portland, 1887; member of the American Ophthalmological Society and American Otological Society; aged 81; died, April 3, of myocarditis, nephritis and cerebral hemorrhage.

Jasper N. Walker, Bastian, Va.; University of Virginia Department of Medicine, Charlottesville, 1898; formerly member of the state legislature, and secretary of the board of health of Bland; aged 71; died, April 8, of cerebral hemorrhage.

John William Augustus Sanders, Lugoff, S. C.; Medical College of Virginia, Richmond, 1904; member of the South Carolina Medical Association; aged 61; died, April 22, in the Camden (S. C.) Hospital of acute coronary occlusion.

William Dacre Walker ⊕ Andover, Mass.; Tufts College Medical School, Boston, 1905; for many years school physician, and member of the school committee; member of the New England Roentgen Ray Society; aged 60; died, April 12.

Sidney Le Grand Williams, Shreveport, La.; Tulane University of Louisiana Medical Department, New Orleans, 1899; at one time superintendent of the Charity Hospital; on the staff of the Highland Sanitarium; aged 61; died, April 9.

Brickhouse Wilson ⊕ Independence, Mo.; Emory University School of Medicine, Atlanta, 1917; served during the World War; on the staff of the Independence Sanitarium and Hospital; aged 44; died, April 4, of coronary heart disease.

Wilton Allen Woodburn ⊕ Pittsburgh; Jefferson Medical College of Philadelphia, 1902; on the staff of the Columbia Hospital, Wilkinsburg; aged 57; died, March 20, in the Columbia Hospital of carcinoma of the cecum.

Robert Jones Hunter, Greensburg, Pa.; Western Pennsylvania Medical College, Pittsburgh, 1906; member of the Medical Society of the State of Pennsylvania; served during the World War; aged 55; died, March 30.

Walter Lawrence Blomgren ⊕ Chicago; Bennett College of Eclectic Medicine and Surgery, Chicago, 1915; served during the World War; aged 44; died, April 20, in the Edgewater Hospital of staphylococcic septicemia.

Joseph A. Anderson, Antreville, S. C.; University of Maryland School of Medicine, Baltimore, 1886; member of the South Carolina Medical Association; aged 76; died, April 10, in the Anderson (S. C.) County Hospital.

Joseph Bishop Wolfe Jr., Coeburn, Va.; Louisville (Ky.) Medical College, 1891; member of the Medical Society of Virginia; aged 69; part owner of the Coeburn Hospital, where he died, April 7, of heart disease.

Harry Hall Wilson, Black Mountain, N. C.; New York University Medical College, New York, 1897; served during the World War; aged 64; died, April 4, in the Halifax District Hospital, Daytona Beach, Fla.

Lester Lawrence Anderson, Stoneville, N. C.; Medical College of Virginia, Richmond, 1927; member of the Medical Society of the State of North Carolina; aged 35; died, April 18, of coronary thrombosis.

Frank Raymond Sandt, Paterson, N. J.; University of Pennsylvania Department of Medicine, Philadelphia, 1900; on the staff of the Paterson General Hospital; aged 61; died, April 5, of coronary occlusion.

David H. Montgomery, Union, S. C.; University of Tennessee Medical Department, Nashville, 1895; member of the South Carolina Medical Association; aged 69; died, April 22, of intestinal obstruction.

Benjamin Nadel, Brooklyn; Long Island College Hospital, Brooklyn, 1912; formerly on the staffs of the Beth Israel and Jewish Maternity hospitals, New York; aged 52; died, April 3, of coronary thrombosis.

William Hamilton Cantwell, Shawano, Wis.; Rush Medical College, Chicago, 1887; formerly postmaster and health commissioner; aged 79; died, April 30, of arteriosclerosis and coronary occlusion.

John Joseph Pietrzak, Detroit; Wayne University College of Medicine, Detroit, 1935; aged 30; died, April 6, at the Herman Kiefer Hospital of pulmonary tuberculosis and spontaneous pneumothorax.

William Alex. Wovschin, New York; University and Bellevue Hospital Medical College, New York, 1912; served during the World War; aged 55; died, April 15, in the Montefiore Hospital.

William C. Wimberly, Fort Gaines, Ga.; Kentucky School of Medicine, Louisville, 1889; member of the Medical Association of Georgia; aged 75; died, March 1, of bronchitis and hypertension.

William A. James, Chester, Ill.; St. Louis Medical College, 1881; member of the Illinois State Medical Society; aged 83; died, April 15, in St. Clement's Hospital, Red Bud, of intestinal obstruction.

Hugh Vincent Cunningham ⊕ Johnstown, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1928; president of the staff of the Mercy Hospital; aged 36; died, March 27.

Clyde Crawford Hardison ⊕ Iron City, Tenn.; University of Nashville Medical Department, 1910; served during the World War; aged 49; died, April 14, in the Coffee Memorial Hospital, Florence.

Harmon P. McKnight, Milford, Neb.; College of Physicians and Surgeons, Keokuk, Iowa, 1890; aged 80; died, April 29, in the Nebraska Soldiers and Sailors Home of arteriosclerosis.

William G. Blackwell, McCormick, S. C.; University of the South Medical Department, Sewanee, Tenn., 1898; aged 60; died, April 10, of a severed jugular vein in a hospital at Greenwood.

Joseph New Campbell, Stamford, Neb.; Lincoln Medical College of Cotner University, 1902; member of the Nebraska State Medical Association; aged 58; died, April 12, of pneumonia.

Joseph George Beaty ⊕ Chilhowee, Mo.; Missouri Medical College, St. Louis, 1893; president of the Johnson County Medical Society; aged 71; died, March 24, of coronary thrombosis.

Jennie Newman Norris, Atlanta, Ga.; Woman's Medical College of Georgia and Training School for Nurses, Atlanta, 1891; aged 76; died, April 5, in the Grady Hospital of carcinoma.

Clarence Galleher Rea, Muncie, Ind.; Jefferson Medical College of Philadelphia, 1904; formerly city health officer; aged 58; died, April 9, at Rochester, Minn., of carcinoma of the colon.

Mary Fisher, Philadelphia; Woman's Medical College of Pennsylvania, Philadelphia, 1889; member of the Medical Society of the State of Pennsylvania; aged 85; died, March 30.

Nathan H. Bickley, Stamford, Texas; Memphis (Tenn.) Hospital Medical College, 1892; member of the State Medical Association of Texas; health officer; aged 73; died, April 17.

Dallas McKeever Murphy ⊕ Bethesda, Ohio; Starling Medical College, Columbus, 1898; past president of the Belmont County Medical Society; aged 64; was found dead, April 4.

Edward W. Greenlee, Kansas City, Kan.; College of Physicians and Surgeons, Medical Department Kansas City University, 1899; aged 74; died, April 17, of chronic osteomyelitis.

Lorin Anson Walker, Owego, N. Y.; University of the City of New York Medical Department, 1883; aged 79; died, March 24, of rheumatoid arthritis and chronic myocarditis.

Louis F. Donaghue, Mahanoy Plane, Pa.; Medico-Chirurgical College of Philadelphia, 1898; formerly county coroner; aged 62; died, March 20, of bronchopneumonia.

Clarence Eugene Brinckerhoff, Miami, Fla.; College of Physicians and Surgeons of Chicago, 1885; aged 78; died, April 19, of chronic myocarditis, arteriosclerosis and nephritis.

Luther P. Youmans, Swainsboro, Ga.; University of Georgia Medical Department, Augusta, 1892; aged 71; died, April 8, in a hospital at Savannah of influenza and myocarditis.

John David Nicodemus, Walkersville, Md.; Jefferson Medical College of Philadelphia, 1879; aged 83; died in April of cardiovascular renal disease and bronchopneumonia.

Samuel French, Plymouth, Pa.; University of Pennsylvania Department of Medicine, Philadelphia, 1893; aged 68; died, March 13, in Kingston of cerebral hemorrhage.

Needham Kahn Moody, Memphis, Tenn.; University of Tennessee College of Medicine, Memphis, 1912; aged 49; died, April 18, in the Gartly-Ramsay Hospital of pneumonia.

Lewis Martin Tinker ✠ Frankfort, Ohio; Bellevue Hospital Medical College, New York, 1894; served during the World War; aged 68; died, March 9, of coronary thrombosis.

Cook Bar Young, Kansas City, Mo.; Canton University Medical Department, Canton, China, 1889; aged 70; died, March 13, of chronic myocarditis and hypertension.

Richard Baxter Rand, North Abington, Mass.; Dartmouth Medical School, Hanover, N. H., 1893; member of the Massachusetts Medical Society; aged 70; died, April 18.

John A. Rhodes, Crawfordville, Ga.; University of Georgia Medical Department, Augusta, 1887; member of the Medical Association of Georgia; aged 74; died, April 9.

George Washington Chabot ✠ Peebles, Ohio; Miami Medical College, Cincinnati, 1886; aged 75; died, April 19, of coronary thrombosis following prostatectomy.

Perry M. Lewis, Orlando, Fla.; Atlanta Medical College, 1915; member of the Florida Medical Association; aged 46; died, April 30, of a self-inflicted bullet wound.

Orion Kemper Thomson, Chicago; Miami Medical College, Cincinnati, 1889; aged 71; died, March 11, of chronic nephritis, prostatitis and arteriosclerosis.

James Elijah Neely, Kansas City, Mo.; Barnes Medical College, St. Louis, 1904; member of the Missouri State Medical Association; aged 64; died, April 11.

Harry J. C. Maus, Detroit; Michigan College of Medicine and Surgery, Detroit, 1904; aged 60; died, April 5, in the Lincoln Hospital of lobar pneumonia.

George Elmer Porter, Warehouse Point, Conn.; Dartmouth Medical School, Hanover, N. H., 1892; aged 70; died, April 11, of cerebral embolism and myocarditis.

José Ramon Alvarez, Havana, Cuba; College of Physicians and Surgeons, Medical Department of Columbia College, New York, 1885; aged 73; died, April 12.

James M. McPherson, Terral, Okla. (licensed in Oklahoma under the Act of 1908); member of the Oklahoma State Medical Association; aged 78; died, April 29.

Jesse Edgar Wright, Macon, Ga.; Vanderbilt University School of Medicine, Nashville, Tenn., 1899; aged 64; died, March 21, of cirrhosis of the liver.

Newell Cutler Bullard, Cambridge, Md.; University of Vermont College of Medicine, Burlington, 1898; aged 64; died, April 20, of cerebral hemorrhage.

William Henry Baxley Jr., Hephzibah, Ga.; University of Georgia Medical Department, Augusta, 1887; aged 74; died, April 22, of coronary thrombosis.

Eleanor Tomes, New York; Woman's Medical College of the New York Infirmary for Women and Children, New York, 1892; aged 88; died, March 3.

Jesse Belmont Rogers ✠ Michigan City, Ind.; Hahnemann Medical College and Hospital, Chicago, 1895; aged 72; died, April 22, of bronchial asthma.

Minnie Ridgeway Bishop, Chicago; Hahnemann Medical College and Hospital, Chicago, 1889; aged 77; died, April 13, of bronchitis and myocarditis.

Ralph Gordon Turner ✠ Walpole, Mass.; Rush Medical College, Chicago, 1933; aged 31, died, March 26, of pulmonary and intestinal tuberculosis.

John Roy Mackenzie, New Rockford, N. D.; Detroit College of Medicine, 1906; aged 57; died, April 10, in a hospital at St. Paul, of heart disease.

Margaret M. Kellogg, Petoskey, Mich.; Eclectic Medical Institute, Cincinnati, 1885; aged 84; died, April 6, of adenocarcinoma of the cervix.

Rutherford H. Paxton, Westcliffe, Colo.; College of Physicians and Surgeons, Baltimore, 1885; aged 74; died, April 27, of cerebral hemorrhage.

Ernest H. Spooner, St. Louis; St. Louis College of Physicians and Surgeons, 1894; aged 74; died, April 20, of arteriosclerotic heart disease.

Frederick Roscoe Ilsley ✠ Medford, Mass.; Harvard University Medical School, Boston, 1892; aged 67; died, April 28, of pulmonary edema.

George H. Chambers, Haverford, Pa.; University of Pennsylvania Department of Medicine, Philadelphia, 1886; aged 73; died, March 21.

L. O. Blalock, Knoxville, Tenn.; Tennessee Medical College, Knoxville, 1906; aged 62; died, April 7, in the General Hospital of diabetes mellitus.

John L. Vickers, Wichita, Kan.; Louisville (Ky.) Medical College, 1895; aged 66; died, April 20, of coronary thrombosis and arteriosclerosis.

Thomas D. Fussell, Rhine, Ga.; Hospital Medical College, Atlanta, 1911; aged 56; died, April 14, of acute dilatation of the heart and influenza.

George Anderson Chain, Philadelphia; Medico-Chirurgical College of Philadelphia, 1899; aged 66; died, March 9, of coronary sclerosis.

George R. Robertson, Fair River, Miss. (licensed in Mississippi in 1882); Confederate veteran; aged 93; died, April 15, of arteriosclerosis.

Hyman D. Rubin, Brooklyn; Fordham University School of Medicine, New York, 1921; aged 41; died, April 26, at the Crown Heights Hospital.

James S. Evans, Houston, Miss.; University of Louisville (Ky.) Medical Department, 1881; aged 81; died in April, of arteriosclerosis.

John Desha Witt, Aurora, Ill.; Hahnemann Medical College and Hospital, Chicago, 1906; aged 63; died, March 2, of coronary occlusion.

Sylvester Edward Charlton, Galt, Ont., Canada; University of Toronto, (Ont.) Faculty of Medicine, 1900; aged 70; died, April 7.

John Henry Nauerth, Lakefield, Minn.; Rush Medical College, Chicago, 1891; aged 78; died, April 16, of carcinoma of the stomach.

William Lee Winn, Columbia, Mo.; Barnes Medical College, St. Louis, 1894; aged 68; died, March 13, of coronary thrombosis.

John W. Drinnen, Riverdale, Tenn.; Tennessee Medical College, Knoxville, 1899; aged 72; died, April 7, of coronary occlusion.

Clarence Eugene Pierce, O'Fallon, Ill.; Washington University School of Medicine, St. Louis, 1903; aged 66; died, April 9.

Edward James Megarr, Brooklyn; Long Island College Hospital, Brooklyn, 1893; aged 70; was found dead, April 16.

William Sherman Thomas, Kansas City, Mo.; Kansas City Medical College, 1892; aged 73; died, March 2, of pneumonia.

James T. Johnson ✠ Cumberland, Md.; Baltimore Medical College, 1892; aged 69; died, April 1, in the Allegheny Hospital.

James O. Rosamond, Easley, S. C.; University of Maryland School of Medicine, Baltimore, 1889; aged 73; died, April 23.

Carp Sanders Kinzer, Johnson City, Tenn.; Tennessee Medical College, Knoxville, 1900; aged 62; died, April 2, of embolus.

William Edgar Trego, Chagrin Falls, Ohio; Chicago Homeopathic Medical College, 1894; aged 71; died, March 27.

Orril L. Smith, Wichita, Kan.; Lincoln (Neb.) Medical College, 1904; aged 71; died, April 29, of gastric carcinoma.

Richard S. Dupont ✠ Detroit; Detroit College of Medicine, 1898; aged 67; died, April 9, of acute coronary thrombosis.

Canute L. Brudewold, Chicago; St. Louis Medical College, 1887; aged 72; died, April 10, of carcinoma of the stomach.

Correction.—The location mentioned in the obituary of Dr. George A. Brown in THE JOURNAL, May 28, page 1850, should have been Mount Ulla, N. C., instead of Banner Elk, N. C. Dr. James Arthur Brown is alive and practicing at Banner Elk.

Correspondence

GONORRHEAL ENDOCARDITIS

To the Editor:—In a letter to the Editor in THE JOURNAL, May 14, Dr. Merrill finds fault with the criteria that we consider essential in making the diagnosis of gonorrheal endocarditis. In doing so he has taken one sentence out of the first paragraph in the second column on page 549 in THE JOURNAL of February 19 and disregarded the preceding and subsequent sentences. In that paragraph it is stated that "the diagnosis of gonorrheal endocarditis depends on a heart lesion developing suddenly in the course of a systemic complication of gonorrhea" and that for an absolute diagnosis a positive blood culture in vivo or a recovery of the gonococcus from the heart valves is essential. Any one who reads this entire paragraph will find no reason for any disagreement.

With respect to the seven cases cited as proved cases I wish to refer to the original articles. My co-authors and I quoted enough from each one to indicate that the patient had a gonorrheal infection and the nature of the treatment as well as the outcome. We are not inclined to doubt the clinical ability of the respective authors quoted.

We did not think it necessary to insert the type of hemoglobinometer employed. The laboratories of Harper Hospital use the Salhi instrument. Dr. Merrill states that there was only a single observation of 63 per cent hemoglobin made. If he will read the last part of the case report it will be found that four months after discharge the hemoglobin of the patient was 81 per cent.

With respect to the statement that an anemia will produce a murmur, there is no argument. However, right under our eyes this patient acquired a murmur of increasing intensity in the aortic area, where previously a soft systolic murmur at the apex, not transmitted, was all that was audible.

This aortic murmur not only persisted during the entire course of the disease, but months after, when the hemoglobin had risen and all clinical signs of gonorrhea had vanished, the new murmur which developed during the course of the disease still persisted. If one had seen the cardiac picture of this woman when she was brought into the hospital, watched it change during the weeks of her illness, and then four months later examined her again, one would be forced to conclude that an active endocarditis had taken place and that definite valvular damage had been wrought.

HUGO A. FREUND, M.D., Detroit.

MASSIVE ATELECTASIS WITHOUT BRONCHIAL OBSTRUCTION

To the Editor:—Kaunitz (THE JOURNAL, May 21, p. 1770) has questioned the possibility that massive atelectasis may, in rare instances, occur without bronchial obstruction. At first we seriously questioned this possibility ourselves, realizing that the idea ran counter to existing experiments and conceptions. Our belief is that atelectasis, in the vast majority of cases, is due to pulmonary obstruction. But enough clinical evidence now exists to deny that atelectasis cannot possibly develop without obstruction.

We feel that nothing has been postulated in this connection (a position claimed as too plain to require proof). One of us became acquainted with the persons and facts concerned in three most dramatic, unfortunate and unexplainable results of anesthesia. At necropsy, obstruction was not found. If our report of these cases failed to state definitely that obstruction was not found, we apologize. The pathologists in two of the cases were most emphatic. In the third case, Dr. Guedel wrote us that obstruction was not seen in the parts of the bronchial tree that were examined.

Since our paper was offered, another case of death on the operating table of massive atelectasis is available in which obstruction was carefully sought and not found at necropsy. This will be published soon in *Anesthesia and Analgesia* together with a full discussion of the work of Lorrain Smith (referred to by Dr. Kaunitz) and many others concerning oxygen poisoning. With the publication of this case there will be in the literature seven cases of sudden death under or immediately following anesthesia from massive atelectasis, in which necropsy showed no trace of obstruction in the bronchial tree. This is not postulation: it is the proof itself.

Intrapleural and atmospheric pressure differences do not eliminate the possibility of atelectasis without obstruction. S. J. Meltzer (On the Respiratory Changes of the Intrathoracic Pressure Measured in the Mediastinum Posterior, *J. Physiol.* **13**:218, 1892) long ago showed that negative pressure differences initiated by respiration, which are primarily dependent on the differential of atmospheric and intrapleural pressures, are not uniformly transmitted through the pleural cavity.

The total of vital capacity plus residual air in the average chest is about 5,000 cc. Thus when 300 or 400 cc. of gas is drawn into the lungs at each breath during quiet depressed respiration it is quite unlikely that this small amount disseminates to all parts of a space capable of expanding to a total of 5 liters, no matter what the pressure differential.

Air does not go into and out of the lungs as though they were simple balloons being inflated and deflated. The anatomic studies of Keith (Further Advances in Physiology, edited by Leonard Hill, London, Edward Arnold, 1909, p. 182) have shown that different parts of the lung expand at different times in a manner comparable to the opening of a Japanese fan. Some parts of the lung may not be ventilated at all for a considerable interval. In line with this conception Haldane and Priestly (Respiration, Yale University Press, 1935, p. 41) and again Schmidt (Macleod's Physiology in Modern Medicine, St. Louis, C. V. Mosby Company, 1938, p. 485) call attention to the wide variations that exist, during shallow respiration, in the composition of the alveolar air from different parts of the same lung. If during these intervals, under anesthesia, only the rapidly absorbable gases are present a small area of atelectasis could readily be established and could continue to spread as a creeping process until terminated by demand for more lung absorption surface.

That such a process does go on during and following anesthesia can be inferred from the work of Muller, Overholt and Pendergrass. (Postoperative Pulmonary Hypoventilation, *Arch. Surg.* **19**:1322 [Dec., part 2] 1929). These investigators showed a marked shrinking of the lung accompanied by an elevated diaphragm, vital capacity reduced to a third of normal and tidal volume reduced one half, in uncomplicated postoperative cases. Pressure differentials seem to be unable to prevent these results.

Dr. Kaunitz suggests that possibly either (*a*) bronchial spasm, (*b*) obstruction by the tongue or (*c*) breathing against a collapsed bag might explain the cases reported in our paper. The first suggestion has been argued for years but the weight of existing evidence is against it. (Coryllos, P. N.: Postoperative Pulmonary Complications and Bronchial Obstruction, *Surg., Gynec. & Obst.* **50**:795 [May] 1930.) Certainly bronchial spasm clinically does not produce atelectasis; quite the opposite. The second and third suggestions, besides being inexcusable anesthesia practice, are unsuited to explain our reported cases. For instance, in one case collapse developed with an endotracheal tube in place, effectively eliminating the factor of tongue obstruction. Furthermore, breathing against inspiratory obstruction, such as would be produced by a collapsed breathing bag, produces pulmonary edema, not collapse (Moore, R. L., and Binger, C. A. L.: The Response to Respiratory Resistance, *J. Exper. Med.* **45**:1065 [June] 1927).

Finally, the fact that animals are able to exist for varying periods in oxygen rich atmospheres was brought out as an objection. This opens the extensive subject of oxygen poisoning. But it should have been added how they live: in preparation of death. High tension oxygen atmospheres were demonstrated as being universally fatal for warm blooded animals by the work of Binger, Faulkner and Moore (Binger, C. A. L.; Faulkner, J. M., and Moore, R. L.: Oxygen Poisoning in Mammals, *J. Exper. Med.* **45**:849 [May] 1927. Faulkner, J. M., and Binger, C. A. L.: Oxygen Poisoning in Cold Blooded Animals, *ibid.* **45**:865 [May] 1927).

We are familiar with the work of Fine, Hermanson and Frehling (Further Clinical Experiences with 95 Per Cent Oxygen for the Absorption of Air from the Body Tissues, *Ann. Surg.* **107**:1 [Jan.] 1938) with high oxygen concentration in man. The conditions under which they worked are not comparable to those used with experimental animals. Frequent interruptions for nursing care and treatment were necessary.

Binger and his co-workers quote one instance from the German literature of changes produced in a dog's lungs within fifteen minutes by inhalation of pure oxygen, although this is unusual. In oxygen poisoning the lungs at necropsy are found "collapsed" (their word), airless and sink in fixing fluid. The blood vessels are engorged. This much of the picture simulates massive atelectasis. But the completed picture is quite different, possibly for this reason. The high pressure head of oxygen allows life to continue much longer than such extensive pulmonary changes would otherwise permit. For instance, Binger took animals out of an oxygen chamber after this condition was well established and produced immediate death. This prolongation of life allows time for further changes in the appearance of the lung. The alveoli refill with red cells and transudate from the engorged lung vessels. The epithelial cells slough, possibly as a result of the existing lung damage, from inadequate exposure to oxygen. The animals all die of severe anoxemia. At least in presenting this guess, no other theory has to be disproved, for no explanation has been advanced to account for the unique pulmonary basis of this mysterious phenomenon, which has puzzled thoughtful men since the time of Paul Bert.

These rare cases of massive atelectasis without obstruction are relatively unimportant. Of greater significance is the possibility that by the use of inert gases in anesthesia a further reduction in the incidence of postoperative pulmonary complications, developing from the widely accepted sequence of bronchial obstruction and atelectasis, may eventuate.

O. R. JONES, M.D.
G. EDGAR BURFORD, M.D.
New York.

"CHRONIC SUBDURAL HEMATOMA WITH ACUTE PSYCHOTIC MANIFESTATIONS"

To the Editor:—With regard to the article by Dr. D. M. Olkon on chronic subdural hematoma with acute psychotic manifestations (THE JOURNAL, May 14, p. 1664) it appears to me that the patient mentioned had an additional diagnosis, that of bromide intoxication, which if true could easily have been confirmed by a blood bromide determination. In the first place there is a history of bromide intake: "He took 'bromo-seltzer' three or four times a day." I infer that this intake continued over a period of about one year since the "bromo-seltzer" was taken for headaches, which began about a year before the patient came under Dr. Olkon's care and "continued." A patient in our series of twenty-one cases of bromide intoxication (Burns, G. C., and Henderson, J. L.: Bromide Intoxication, *California & West. Med.* **46**:392 [June] 1937) had a similar history of having taken "bromo-seltzer" in excessive quantities, as a result of which he contracted a bromide intoxication. His symptoms were such that the diagnosis was thought to be dementia paralytica and it was only after the laboratory returned a negative report on the spinal fluid that a test of the bromide content of the blood was taken. This showed 250 mg. per hundred cubic centimeters. Another patient in our series showed a tendency to stagger, stumble and fall five months prior to admission, apparently the result of bromide intoxication, since she had been taking bromides for two years prior to her admission. This is comparable to Dr. Olkon's patient, who "had a tendency to stumble and fall" about six months before the onset of his acute symptoms.

Dr. Olkon's physical, neurologic and psychiatric observations are all typical of bromide intoxication. The psychiatric picture in particular is that of an acute organic reaction, a toxic delirium with confusion, disorientation and a tendency to misidentify even his nearest relatives. In particular the hallucinations were vivid and terrifying and he tended to react to them acutely and promptly. This mental picture is very different from the usual dull retarded stuporous, even comatose, symptoms typical of subdural hematoma, which of course Dr. Olkon recognized and is his reason for reporting the case: "Careful search of the literature did not reveal any case of chronic subdural hematoma in which mental features were predominating and the organic manifestations mainly absent; for these reasons this case is reported." The average hospital diet contains enough chlorides to replace bromides to the point at which such symptoms would disappear in two to three weeks. In any event I feel that bromide intoxication should be ruled out before these symptoms are attributed to chronic subdural hematoma.

J. L. HENDERSON, M.D., Compton, Calif.
Resident Physician, Compton Sanitarium.

ACTION OF HYPOGLYCEMIA ON NERVOUS SYSTEM

To the Editor:—I read with great interest in THE JOURNAL, April 30, some observations on the action of hypoglycemia on the central nervous system by Dr. Ernst Gellhorn.

May I venture to offer a somewhat different explanation of the benefits of hypoglycemia in schizophrenic patients. It is agreed that there is a reduction in the oxidation rate and sugar consumption in the central nervous system, as proved by Himwich, but I do not believe that there is much evidence to sustain the opinion that the sympathetic centers are stimulated by this regimen, except as a result of the dominance of the vagus in the hypoglycemic state and the subsequent calling into play of the principle of homeostasis. The sympathetic discharge probably comes at the end of the treatment, as Dr. Gellhorn himself has noted, but I believe the benefits derived are rather due to the preliminary vagotonic state.

May I refer to some observations of my own in a discussion on this whole subject at a meeting of the Section of Neurology and Psychiatry of the New York Academy of Medicine, held on Oct. 12, 1937, and reported in the *Archives of Neurology and Psychiatry* (**39**:853 [April] 1938). In this discussion I said:

> The effect of insulin seems to be, as Dr. Himwich has demonstrated, a reduction in the entire metabolism of the brain. There are indications during this phase that the vagus nerve begins to dominate the scene. One notes, for example, vomiting, sweating and bradycardia—evidences of increased vagal tone. Dr. Sakel has spoken of vagotropic effects and the use of insulin to paralyze adrenal activity. I wish to expand on this vague concept and to stress the neurophysiologic mechanisms involved. The vagus nerve is the regulator of anabolism, the great conserving force in human economy. It dominates in hibernation states, when the vital forces must be husbanded—witness the bradycardia, low blood sugar and lowered metabolism in these states. It counteracts the effects of sympathetic domination, in which all the fighting resources of the body are mobilized for defense, as has been pointed out by Cannon.
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> Insulin treatment, therefore, is a form of protective therapy. It seems that the effect of insulin is to reduce the tempo of the whole vital process in a person who is battling with all sorts of complexes, panics and threats to the ego, with consequent mobilization of all the resources of

defense, in a struggle which results not in success but in the patient's becoming ill. The effect of insulin, then, is to spare these fruitless expenditures of energy and protect the patient against this fitful, anarchic discharge of energy.

This method of therapy is also protective on the psychic side. It is a form of necrosis therapy, with blotting out of the abnormal activity of the mind consequent on the states of panic and threats to the ego already spoken of. These are held in abeyance because, so far as is known, in the well developed narcosis no psychic processes go on and the person in this state is spared the necessity of thinking about his problems. This may explain the favorable effects of sodium amytal narcosis reported from so many sources. As a result of blotting out the abnormal activity of the mind, the organism recuperates, and, owing to the inherent factors of safety in the human organism stressed by Meltzer and others, the patient returns to the problems of living with a fresh approach and begins to function anew.

This subject is vital and represents a totally new approach to the human mind. The brain is now being considered as an organic unit in the human body and subject to the same biochemical and neurophysiologic mechanisms which obtain in other parts of the human economy.

E. D. FRIEDMAN, M.D., New York.

Queries and Minor Notes

THE ANSWERS HERE PUBLISHED HAVE BEEN PREPARED BY COMPETENT AUTHORITIES. THEY DO NOT, HOWEVER, REPRESENT THE OPINIONS OF ANY OFFICIAL BODIES UNLESS SPECIFICALLY STATED IN THE REPLY. ANONYMOUS COMMUNICATIONS AND QUERIES ON POSTAL CARDS WILL NOT BE NOTICED. EVERY LETTER MUST CONTAIN THE WRITER'S NAME AND ADDRESS, BUT THESE WILL BE OMITTED ON REQUEST.

ERGOTAMINE TARTRATE IN MIGRAINE

To the Editor:—A patient with severe migraine headaches has been studied from an allergic point of view and all substances to which she shows any response of an allergic type have been eliminated from her diet. Typical attacks are preceded by a twenty-four hour period of exhilaration, one-sided headaches coming on at the end of this time, usually on the left side. There is a visual aura. She is, so far as I can determine, in perfect health otherwise. Her past history is negative; her menstrual history is normal. She has one child, aged 5. I have been using ergotamine tartrate in 1 cc. doses. One dose always is sufficient to relieve her headache. A 0.5 cc. dose, however, does her no good. For the first month or two during which I treated her she had headaches at intervals of from ten days to two weeks. For the past two months, however, her headaches have become increasingly frequent and in the last ten days she has had four attacks, each responding within two or three hours to the injection of ergotamine tartrate. I am well aware of the danger in long continued use of ergot preparations but I am not able to discover the amount of ergotamine tartrate that produces these effects. Is there any other means of bringing prompt relief from these headaches? Should I discontinue the use of the ergot preparations and try to rely on the usual sedatives? About how long a time is required for toxic properties of the preparation to produce circulatory or nervous symptoms? Is it possible to have migraine headaches at as short intervals as this patient apparently has them?

M.D., Texas.

ANSWER.—There seems to be no reasonable doubt about the diagnosis. The patient has the usual visual aura followed by hemicrania. She has, moreover, been relieved in the past by ergotamine tartrate. The fact that the headaches are increasing in number, with a short interval between them, suggests other factors which are not entirely compatible with the diagnosis. It is unusual for patients to increase the frequency of their attacks. Because of this the patient should be thoroughly rechecked, special attention being paid to a possible endocrine imbalance.

Specifically it may be stated that no other drug gives such prompt relief in migraine as ergotamine tartrate. If toxic manifestations from ergot are beginning, the patient will first note a persistent numbness and tingling of the extremities, possibly with some evidence of peripheral vasospasm. It is considered inadvisable to give ergotamine tartrate, either subcutaneously or intramuscularly, in more than 1 cc. doses, administered in twenty-four hours, nor more than two such injections in any one week. In some patients this dosage may cause signs of ergot poisoning and a good general rule would be to use not more than 1 cc. per week. Some relief may be obtained by the use of a readily assimilable calcium compound, such as calcium gluconate, 4 Gm., two or three times a day. Further discussion of this subject can be found in the article by von Storch to be published in THE JOURNAL.

POSSIBLE TYPHOID FEVER

To the Editor:—A boy, aged 14, one of three children with typhoid, had a typical typhoid course for approximately seven weeks. Fever ranged from 99.5 F. in the morning to 103.5 in the afternoon. He has completely recovered. The Widal test and culture were both positive. However, a sister, aged 10, became ill about three days after him with fever and mild headache. Her temperature varied from 99 to 100 F. For the past forty-five days her fever has appeared from one to four hours only during the afternoon. She has had fever for ninety days to date. Another sister, aged 7, became ill two or three weeks after the brother and her temperature has taken about the same course as her sister's, around 99 to 99.5 F., for about seventy days. No blood test or culture was made on the girls. The sisters have never been very sick and except for a little rise in temperature are normal in every respect. All other examinations were negative. Would you consider the duration natural and continue to keep them in bed, with proper food and nursing? What are the possibilities of some hidden complication and where would you suggest looking for it? Is there any drug that might hasten recovery?

M.D., Texas.

ANSWER.—The diagnosis of typhoid in the case of the girls mentioned in this question was entirely warranted by the circumstances but the clinical course has not been that of typhoid. Typhoid in children may show aberration from the adult form but as a general rule the course of the disease is shorter than in the adult. "Ambulatory typhoid," or typhoid with low fever, does occur but it is rather rare and it would be unusual to have two such cases at one time. This situation requires the application of accurate diagnostic measures. If the girls have typhoid it may be demonstrated by the serologic reaction and the isolation of typhoid bacilli from the stools. It seems more than likely that the cases will prove to be something other than typhoid. If this is true it will be necessary to work through the list of causes of long continued fever. Only by this procedure can one arrive at a correct diagnosis. Among the more common causes for this clinical picture are mediastinal adenitis, infectious mononucleosis, and rheumatic fever. Tuberculosis must be ruled out, although this disease in children is likely to take a much more stormy course than that described.

If the cases prove to be typhoid, the only treatment is continued time and patience. It is difficult to see what complication of typhoid could be present without becoming quite obvious after such a period.

STERILIZATION OF RUBBER BOOTS AND SHOES

To the Editor:—What is the simplest and most effective method of sterilizing rubber boots, leather shoes and clogs, suitable for an industrial organization? Steam sterilization tends to devitalize rubber and hardens leather. Gas would be preferable to a liquid chemical.

GEORGE M. BLANK, M.D., Lorain, Ohio.

ANSWER.—The majority of agents that might provide disinfection are prone to damage the articles mentioned. Formaldehyde makes leather brittle, sulfur attacks metal parts, various possible hydrocarbons may dissolve or attack rubber. Glues used in connection with footwear may be dissolved by many liquids. Penetration is slight by fumigation; sunlight or artificial ultraviolet rays may not be introduced readily in most instances. In the case of wooden clogs there can be no objection, except in connection with fading, to submersion in a chlorine liberating solution or appropriate solutions of commercial agents, such as saponated solution of cresol. In the case of rubber boots and leather boots or shoes the use of dusting powders is likely to yield unsatisfactory results or to cause dermatitis to the subsequent wearer. Many organisms are short lived and will die if the articles are not worn for a few days. Exposures to intense sunlight will be of some value, but obviously penetration is not possible in many instances. If the matter is limited to the occasional disinfection of a single pair of shoes, thus not warranting elaborate equipment, it is possible that the best results may be obtained by a generous sponging with a phenolic solution or equivalent coal tar bodies. This will not yield perfect results.

Special ultraviolet equipment may be introduced into the individual shoe or boot as may be required. This will represent an expensive, time consuming and somewhat practical procedure. Hydrocyanic acid fumigation, carried out in gas tight cabinets under safe conditions, will be effective in killing off animal parasites but is of little value as a germicide. The prospective results from this procedure do not warrant the required outlay. If any chemical agent is used, extensive airing of the boots and shoes is a prerequisite to rewearing. In general this problem tends to resolve itself into the practice of procuring conditions with reference to footwear that will make sterilization or disinfection unnecessary.

DEXTROCARDIA WITH SITUS INVERSUS

To the Editor:—A boy, aged 12 years, on careful x-ray examination is shown to have dextrocardia. In addition, his stomach, liver, kidneys and cecum are reversed. Will you please advise me regarding the frequency of this condition?

L. C. CHADSEY, M.D., Brockville, Ont.

ANSWER.—Congenital dextrocardia with or without the situs inversus is a rare condition. Dextrocardia without transposition of the abdominal viscera is almost always associated with other structural defects in the heart, but the heart is likely to be normal in instances such as that noted of dextrocardia with the situs inversus. In Dr. Maude Abbott's statistics of congenital heart disease among 1,000 cases analyzed by her, fifteen were of dextrocardia with situs inversus, four of which complicated other defects.

There are, so far as is known, no complete statistics of this type of dextrocardia in the population at large but there are a few suggestive studies, one of which was the analysis of Boston School Children some years ago. Among 27,900 school children from four districts in Boston (West End, North End, Charlestown and East Boston) there were three cases (0.01 per cent) of congenital dextrocardia with the situs inversus. Probably this is not far from the true incidence of congenital dextrocardia with the situs inversus in the population at large.

INSULIN AND HEXYLRESORCINOL ORALLY

To the Editor:—What is the present status of insulin by mouth with hexylresorcinol?

GUY E. FINKLE, M.D., McPherson, Kan.

ANSWER.—The present status of the administration of insulin by mouth with hexylresorcinol is purely experimental. Daggs, Murlin and Murlin (*Am. J. Physiol.* **120**:744 [Dec.] 1937) reported that they obtained a significant fall in the blood sugar in only about 50 per cent of dogs so treated. A fall of 20 mg. or more per hundred cubic centimeters was considered significant. But these animals were made to fast for sixteen hours prior to the administration of insulin and were given from 100 to 250 units of insulin at a dose. Furthermore, even when a fall in blood sugar did occur, it was not maintained for more than two or three hours.

These results are interesting and hopeful but, even if confirmed by others, the practicability of their application to the treatment of diabetes mellitus is doubtful.

HYPERTENSION AND DECOMPENSATION

To the Editor:—A white woman, aged 52, who has been known to have hypertension for five years, suddenly had two successive attacks of transitory blindness in the right eye. Examination showed a normal disk, sclerotic arteries with crossing compression of the veins, and no exudate or hemorrhage, but a dilated pupil responding poorly to light in the right eye. The blood pressure is 180 systolic, 120 diastolic. Several days later, general weakness and drowsiness prompted a determination of the nonprotein nitrogen, which was found elevated to 60 mg. per hundred cubic centimeters. Fluids by mouth were then forced and hot pads applied to the back for a week, when a second test showed 32 mg. of nonprotein nitrogen per hundred cubic centimeters. At this time the patient felt much stronger and no longer drowsy. Repeated urine examinations showed no dextrose, albumin, casts or red cells and a specific gravity of 1.016. The output of urine on forced fluids was from 2 to 2.5 liters. Until the attack of blindness the chief complaint was inability to walk more than a block without fatigue and dyspnea. There appears to be a mild ascites but no ankle edema, sacral edema, cyanosis or orthopnea. In a period of one year there has been a gain of 14 pounds (6.4 Kg.) without any increase in appetite. The pulse rate is 80. The following statements appear likely: The patient has latent edema, and this and the mild ascites are due to beginning congestive heart failure secondary to the essential hypertension. The patient has considerable kidney damage, presumably due to prolonged hypertension, and accumulation of nonprotein nitrogen is prevented only by a free, large intake of fluid. (Incidentally, on bed rest and sodium nitrite, the patient's blood pressure came down from 180/120 to 146/82 and oscillates between these levels.) What methods of combating the congestive failure (which I expect to increase progressively) are available which do not require a restriction of fluid intake? Digitalis seems contraindicated with a pulse rate of 80, and mercurial diuretics also. Is it likely that a vascular crisis causing spasm of the retinal vessels might similarly affect the kidney and cause temporary loss of function, which is responsible for the azotemia observed in this case? What further suggestions for treatment can you make; e. g., pancreatic hormones?

M.D., New York.

ANSWER.—The conclusions as stated are logical and warranted from the data available. The fall in arterial tension from 180/120 to 146/82 with bed rest and sodium nitrite reveals that the arterioles have not yet become extensively sclerotic. Under such circumstances one may hope for better therapeutic results than when the arterioles are rigid and the diastolic tension is fixed.

The acute transient blindness was probably due to arterial or arteriolar spasm of the retinal vessels. The drop in tension with vasodilator medication reveals that the great majority of the vessels are relaxable and therefore also prone to spasm. It is possible, but not probable, that similar renal arterial spasm caused the hyperazotemia. It is more logical to consider that the patient's renal functional efficiency had been impaired for some time with a gradually rising azotemia, discovered at the peak. The primary and fundamental failure of the kidneys in nephritis is depression of the renal ability to concentrate the urine. The response to forced fluids in this instance is illustrative. Under such circumstances as these, there is no alternative but to give the patient's kidneys sufficient water to permit adequate daily removal of the metabolic débris. Renal function studies are in order. At least the concentration test and the urea clearance test should be carried out and repeated at intervals of several months. The technic and interpretations were given in Queries and Minor Notes in THE JOURNAL, Feb. 8, 1936, page 484.

Despite the additional burden it may place on the heart, a liberal fluid intake is absolutely essential. The burden this engenders can be minimized by spreading the intake out; the patient should consume fluids in small quantities but at frequent intervals. Adequate therapy must invariably take the causation into consideration. Are there any other sources of cardiac injury in addition to the hypertensive arterial disease? Obesity might be one. Coincident anemia would greatly add to the cardiac problem as well as to the renal one. If the hemoglobin content of the blood should be found below 85 per cent by accurate determination, prompt treatment is indicated. The xanthine derivatives, particularly aminophylline or the more soluble and less irritating glucophyllin (a German product containing 10 per cent dextrose and 2 per cent theophylline), may, by aiding the coronary circulation, do much to support the myocardium. An adequate supply of available dextrose is important; cardiac efficiency is often much improved thereby. The most important aid, however, which may be given this heart is in reducing the burden of required work. This means reduction of the diastolic tension for a long period. The vascular sedatives, such as sodium nitrite, bismuth subnitrate (0.6 Gm., or 10 grains, thrice daily) or small doses (0.03 Gm., or one-half grain) of erythroltetranitrate should prove of value. If apprehension or high nervous tension are considered factors elevating the arterial tension of the patient, moderate doses of bromides (approximately 0.6 Gm., or 10 grains, thrice daily) may be of aid. The thiocyanates, although effective arteriolar sedatives, are not safe, particularly in this instance with definite renal impairment. The larger fluid intake should also contribute toward reduction of the hypertension. The various tissue extracts, among which insulin free pancreatic extract is perhaps the best known, have vasodilator properties similar to adenosine. But the fact that they must be administered hypodermically at frequent intervals over many months makes this form of vascular sedation unpractical.

If the patient is overweight, gradual reduction is highly desirable. Radical restriction of the protein intake is contraindicated; it would aggravate any tendency to anemia and edema and be of no benefit in controlling the hyperazotemia. All spices and condiments are best deleted. Salt in small amounts, such as used in ordinary cookery, is advisable. Coffee and tea are permissible except in the late afternoon and evening. The morning stimulation is desirable and caffeine is both a cardiac and a renal stimulant.

LIVER AND IRON IN SECONDARY ANEMIA

To the Editor:—What is the current opinion of authorities doing blood work relative to the value of liver extract given orally in the treatment of secondary anemias? Also I should like to know whether or not such commercial preparations as "Lextron" of the Eli Lilly Company are thought to contain sufficient available iron in the doses recommended for the treatment of secondary anemias.

ROBERT G. PRICE, M.D., Bloomington, Ill.

ANSWER.—In the majority of hypochromic (secondary) anemias it is now generally agreed that there is no advantage in giving liver preparations provided adequate doses of iron salts are used. Adequate doses of iron compounds are: iron ammonium citrate 6 Gm. (90 grains) daily; ferrous sulfate 0.6 Gm. (9 grains) daily; ferrous carbonate 4 Gm. (60 grains) daily. If these doses are used there is no added therapeutic benefit from the use of liver. However, in a few cases of hypochromic anemia complicated by massive hemorrhage, liver extract containing the so-called Whipple secondary anemia fraction may be administered concurrently. Lextron is a proprietary name for a complex product stated to contain in each capsule "liver-stomach" concentrate 0.455 Gm. (7 grains), iron

and ammonium citrate green 0.2 Gm. (3 grains), vitamin B_1 20 international units, and vitamin B_2 20 Sherman units. In recommended doses this is equal to from 1.75 to 2.3 Gm. (27 to 36 grains) of iron ammonium citrate green a day. This is obviously not an adequate dose of iron for best results. It is best to give iron first and supplement it with the Whipple fraction of liver only in the few cases of hypochromic anemia if iron compounds alone fail to bring the blood to normal in a reasonable time. Lextron does not stand accepted by the Council on Pharmacy and Chemistry.

POLYPOSIS OR CANCER OF COLON IN CHILD

To the Editor:—A white boy, aged 5, has had recurrent attacks of pain in the abdomen for the past eighteen months. At these times gross pus and blood are seen in the stool. Microscopic examination of the stool shows no specific causative organism. The blood and urine are normal. X-ray examination of the gastro-intestinal tract gives normal results excepting for roughness in the descending colon. This condition was diagnosed by the x-ray department as probable colitis. The patient has passed small globular chunks of well preserved tissue by rectum which microscopically have the appearance of polypoid tissue. From this I have made a diagnosis of multiple polyposis of the colon. Please discuss treatment in a case of this type together with references to the literature.

M.D., District of Columbia.

ANSWER.—Simple polyposis of the colon of the so-called congenital type is said to have its highest incidence in children and young adults. The entire colon is frequently affected, but the process may be limited to the rectum and sigmoid. These portions of the colon are almost always involved and hence a proctoscopic examination should give further diagnostic information. Chronic amebic colitis has apparently been excluded by the failure to find Endamoeba histolytica in the stools. So-called nonspecific ulcerative colitis can probably be excluded by the proctoscopic examination, for this disease also almost invariably involves the rectum and is not difficult to differtiate from polyposis except for the cases of chronic and long-standing ulcerative colitis in which secondary hyperplasia and polyposis develop—a situation obviously not obtaining in the case described.

The passage of "small globular chunks of well preserved tissue by rectum which microscopically have the appearance of polypoid tissue" is almost never seen in ulcerative colitis. This statement applies equally to benign polyposis, for in this condition the polyps are firmly attached to the bowel, they are not necrotic, and they rarely if ever slough. The presence of polypoid tissue in the stool suggests the diagnosis of carcinoma. This possibility fits well with the known tendency of benign polyps to undergo malignant transformation—a tendency estimated at from 40 to 50 per cent. Further careful microscopic study of the tissue passed by rectum would probably reveal definite evidence of carcinoma.

If this should be the case, radical surgery offers the only possible hope, but, of course, the prospects for permanent cure are not bright. There are good discussions of the subject and references to the literature in such standard textbooks as "The Colon, Rectum and Anus," by Rankin, Bargen and Buie, and "Proctology," by Yeomans. Ralph M. Larsen described an infectious polypoid colitis (*Arch. Int. Med.* **51**:236 [Feb.] 1933) but the case reported bears little resemblance to the one cited.

BLANKETS AND TEMPERATURE FOR INFANTS

To the Editor:—I have been telling mothers who ask how warmly a child should be covered that a thermometer placed between the blanket and the baby should register within a few degrees of 80 F. Is there a range of temperature in that area (i. e., between the blanket and the baby's body) which is considered safest?

M.D., New York.

ANSWER.—No definite answer can be given to the question as to the range of temperature between the blanket and the baby's body. The size of the baby, its age, its subcutaneous tissue and its heat regulating mechanism would all come under consideration in the answer to this question. There must be great individual variations in these various factors in different babies. This becomes at once evident in the care of a large station for premature infants, where it has been noted that babies of equal age and weight will require different incubator temperatures to maintain their normal body temperatures. The incubators must be adjusted in a range from 78 to 90 F. for babies of different age weight.

Another factor would be the texture and quality of the sleeping garment worn by the infant. If the baby was in a heavy woolen sleeping suit, a given temperature between the blankets might be too warm. On the other hand, this temperature might be too cool for the baby if he was dressed in only a light garment. The temperature of the sleeping room and the thickness and type of mattress would also be factors that would influence the warmth of the infant.

It must be admitted that the modern mother desires and is flattered by specific instructions. She would rather be told the exact temperature to have the baby's bath than to test the warmth of the water with her elbow as the old fashioned mother did. However, owing to the many variables mentioned, it would seem almost impossible to advise her to insert the thermometer between the blankets and advise her the exact degree of Fahrenheit which would be optimal for the warmth of the baby.

It would seem better to advise the mother in the old fashioned common sense way to feel the baby's hands or feet and note whether these are cold or warm or whether the baby is restless or sweating.

VESICOVAGINAL FISTULA

To the Editor:—Is there any satisfactory contrivance to be worn by a woman with a vesicovaginal fistula? This is a recurrent malignant condition which originated in the cervix and was irradiated apparently successfully three and one-half years ago. The woman is in good general condition and probably would have several months to live and go about if she could keep dry.

M.D., Virginia.

ANSWER.—There is no satisfactory contrivance to be worn by a woman with a vesicovaginal fistula. The most satisfactory substance for local application is kaolin ointment prepared as follows: A puddle of liquid petrolatum is poured on a glass slab. Kaolin powder is gradually added and worked into the oil with a spatula. Sufficient kaolin is used to make a mixture the consistency of very thick cream.

ARSPHENAMINES AND BISMUTH BY INUNCTION OR SUPPOSITORY

To the Editor:—Has any effort been made to administer arsphenamine, neoarsphenamine or bismuth as an inunction in a suitable ointment base, or rectally in suppository form?

M.D., Louisiana.

ANSWER.—Arsphenamine, neoarsphenamine and bismuth compounds have been administered by inunction in the treatment of syphilis but without success. According to the latest pharmacologic literature on the subject of absorption through the skin (Macht, D. I.: The Absorption of Drugs and Poisons Through the Skin and Mucous Membranes, THE JOURNAL, February 5, p. 409) the ordinary fixed oils and fats employed in making ointments are poor carriers for other drugs when penetration into the systemic circulation is the object. The chief exception to this rule among the heavy metals are mercury and inorganic mercurial compounds. With regard to absorption by rectum of drugs introduced in the form of suppositories, the chances for absorption are theoretically more promising but there is no record of the successful administration by that route of the drugs mentioned in the treatment of syphilis.

STRONTIUM BROMIDE

To the Editor:—I should like advice on the advantages and disadvantages of strontium bromide over other forms when bromide therapy is indicated. Would the addition of calcium gluconate increase the value of the bromide prescription?

J. M. BAILEY, M.D., Hopewell, Va.

ANSWER.—The theory that strontium salts would be more slowly absorbed and therefore have a more gradual and milder action has been proved to be without foundation. The strontium salts are more expensive. Calcium compounds are not sufficiently well absorbed to exert a systemic sedative effect.

LIQUID PETROLATUM

To the Editor:—Is there any harm to a patient who takes plain mineral oil daily for many years? Is there any brand of mineral oil that is best, and are all brands sold by druggists in gallon lots just as good as those sold at a much higher price by the physicians' supply houses? One woman patient told me that she has taken mineral oil at night for over twenty years for constipation.

THOMAS C. HINKLE, M.D., Onaga, Kan.

ANSWER.—There is probably no definite or serious harm likely to result from the taking of liquid petrolatum daily even for many years. One objection that has been raised against such a practice is that it may rob the system of fat soluble vitamins. Diversion of fat soluble vitamins may be minimized by administering the oil on an empty stomach. However, a liberal intake of vitamins is likely to compensate for any that might be lost in the oil. There is no essential difference between various brands of mineral oil excepting as to viscosity.

HYPERTENSIVE RETINITIS OR FUNDUS INJURY FROM BRIGHT LIGHT

To the Editor:—A man, aged 55, left for work one morning feeling in good health. He has no history of previous eye trouble. He was testing light bulbs when a bright light flashed in his face, blinding him in one eye. He immediately reported this fact to his foreman, who disregarded it. His lawyer referred him to me for my professional opinion as to whether the flash of light was the exciting factor in causing his blindness. External examination of the right eye gave negative results. I could find no evidence of malingering after testing him in several ways. Fundus examination showed an old occlusion of the central retinal artery. There is moderate sclerosis of the retinal artery with marked areas of angiospasm. There is a small hemorrhage along the superior nasal artery. The left eye shows similar vascular changes; namely, moderate sclerosis and angiospastic changes. There is a small hemorrhage along the inferior temporal artery, and about the macula are areas of exudate. A diagnosis of old occlusion of the central retinal artery in the right eye was made, with moderate sclerosis of the retinal arteries and hypertensive retinitis with hemorrhage in both eyes, all conditions being due to the cardiovascular status of the patient. Physical examination revealed the heart enlarged and the rhythm normal. The blood pressure was 230 systolic, 130 diastolic. Could the flash of light have been the exciting factor in causing this man to have unilateral blindness?

M.D., Michigan.

ANSWER.—The diagnosis of hypertensive retinitis with hemorrhages is probably correct and that of course is enough to explain the poor vision and optic atrophy. The general picture of cardiorenal disease is sufficient to cause the retinal arteriosclerosis and the occlusion of the central artery.

Any optic nerve change that could come from a flash of light would require months to develop. A flash of light may cause disturbances of the fundus in two ways; usually (the type of condition which is seen following watching the sun during an eclipse) there is a macular edema which may subside and leave no visual disturbance or visible sign. The edema may take the form of a cyst, which may rupture and leave a hole in the macula with a permanent central scotoma and poor vision. This may be followed by a partial retinitic optic atrophy. The retinal blood vessels would not be disturbed in such a case. It is possible, but rarely happens, that optic neuritis may follow severe exposure to light, usually sunlight. This would produce a picture of secondary optic atrophy with slight changes in the retinal blood vessels.

The patient's condition probably was entirely independent of the flash of light. The vision in this eye may have been poor for a considerable period and merely discovered suddenly following the flash of light.

SODIUM THIOSULFATE IN SYPHILIS

To the Editor:—Does the administration of a solution of sodium thiosulfate intravenously have a place in the treatment of syphilis? Is it spirocheticidal? I have a patient with whom the administration of preparations of both arsenic and bismuth must be suspended for some time and for whom the sodium thiosulfate is rapidly clearing up a dermatitis of long standing. Will the sodium thiosulfate also be a factor in the treatment of this patient's syphilis?

M.D., New Mexico.

ANSWER.—Sodium thiosulfate was popularized as a remedy for postarsphenamine dermatitis and certain other metallic poisonings by the work of McBride and Dennie in 1923. The evidence accumulated then and which has continued to accumulate as to its value in the treatment of metallic poisoning is of two varieties. Laboratory studies calculated to measure the excretion of arsenic or of certain other heavy metals in experimental animals and human beings with or without the added influence of sodium thiosulfate have been completely contradictory. Certain investigators have found that the excretion of heavy metals was increased by the use of sodium thiosulfate, while others have found the precise opposite. On the whole the laboratory investigations on this point, both in animals and in human beings, have been incomplete and unconvincing.

There have been numerous reports of the use of the drug in the treatment of exfoliative dermatitis, other types of arsenical treatment reactions, and in other types of skin diseases not associated with the treatment of syphilis. These reports are for the most part of individual cases or of small groups of cases. They deal with arsenical reactions or nonarsenical and nonsyphilitic skin diseases, which, without any treatment, have an extremely variable course; and the reports of the value of sodium thiosulfate in these conditions are, to the critical observer, as unconvincing as the laboratory work.

So far as arsenical reactions are concerned, the opinion of syphilologists is divided, one group of observers feeling that the drug is of some value largely on the basis that one or a few patients treated with it have recovered, whereas another group of observers feels that the drug is completely valueless, that the reported recoveries are not adequately contrasted with a control material, and that in the type of cases reported recovery might have occurred as promptly without as with sodium thiosulfate.

The drug has no spirocheticidal action and is completely without value in the treatment of syphilis. It has been uncritically proposed as a method of treatment for so-called Wassermann fast syphilis, but there is no rationale to its use in this condition and no reason to believe that anything is accomplished by its use in any form of syphilis.

As far as known, sodium thiosulfate does no serious harm and it may be a valuable psychotherapeutic measure for both physician and patient in the sense that it persuades both of them that something is being done for the patient's illness.

References:

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van den Branden, F.; Appelmans, M., and Pottier, R.: Toxic Effect of Tryparsamide Mixed with Sodium Thiosulfate on Renal Parenchyma, *Ann. Soc. belge de méd. trop.* **16**: 121 (March 31) 1936.

PREGNANCY AFTER THROMBOPHLEBITIS

To the Editor:—A normal, healthy primipara, aged 24, was observed throughout a normal gestation and delivered normally of a healthy child in 1930. On the tenth postpartum day, after being out of bed in a wheel chair for the first time, the patient had a fever, and phlegmasia alba dolens of the left leg ensued. Blood cultures were negative. Three months' hospitalization followed, and then a very gradual resumption of minimum activity. A moderate varicosity of the left leg and swelling, particularly after unusual activity (dancing) persist with gradual improvement in the degree of swelling. An elastic stocking has been worn with relief. An eminent authority proposes to inject the varicosity following high ligation. Numerous varying opinions concerning the advisability of another pregnancy have been rendered. The attitude of the patient is bitter—she fears a repetition of the experience. If good care under favorable circumstances prevails, is subsequent pregnancy inadvisable? What is the likelihood of sterility following the puerperal fever? Are similar complications more prone to develop once having occurred?

M.D., New York.

ANSWER.—Thrombophlebitis complicating a pregnancy is not likely to repeat itself in a subsequent gestation, particularly when an interval of seven or eight years has elapsed. The leg veins have undoubtedly become obliterated as a result of the thrombotic process. The edema which is present at this time, particularly following exercise, is the result of the obliteration of important venous channels.

In all probability it would be safe for the patient to become pregnant again. An intelligent explanation of the underlying mechanism should result in the proper attitude on the part of the patient. One cannot guarantee that such a complication will not recur but, if experience is of value, one would not expect a repetition of this complication.

The value of high ligation and injection of the varicosity that is present would have to be determined by examination of the patient. This procedure is commonly resorted to with favorable results.

The likelihood of sterility following puerperal fever would depend on the extension of the inflammatory process. The veins of the pelvis may have been involved but the reproductive organs could easily have escaped any extensive injury. If this should be the case, one would expect normal reproductive organs. In the event that the patient fails to conceive after a limited trial, visualization of the reproductive tract by the injection of opaque substances and x-ray studies will determine the patency of the tubes.

ECTODERMAL DYSPLASIA

To the Editor:—A and B are married and have a daughter 15 months old, normal and in the best of health. B, the wife, has a brother, aged 24, with ectodermal dysplasia. This brother has no teeth, a scanty growth of hair around the periphery of the calvaria, a saddle back nose and no sweat glands. His Wassermann test is negative. Another brother had ectodermal dysplasia but died at 18 months. One sister, unmarried, and B are both normal and well. B's mother and father were first cousins; their mothers were sisters. Going back two generations in B's family, there is no known history of ectodermal dysplasia except the two instances mentioned. Examination of A's lineage reveals no known instances of ectodermal dysplasia. What advice can be given to A and B concerning additional children? Is ectodermal dysplasia hereditary? If so, does it follow the sex-linked pattern of hemophilia? Similarly, what advice should be given to B's unmarried sister? Kindly include references in your reply.

M.D., New York.

ANSWER.—With the subject matter concerned in the questions being in the case history stage, categorical answers can hardly be given to these questions. This subject is well discussed in a work by E. A. Cockayne entitled "Inherited Abnormalities of the Skin and Its Appendages" (New York and London, Oxford University Press, 1933). A discussion of this subject, together with pertinent literature and case histories, will be found beginning on page 218.

AMENORRHEA AND DEMENTIA PRAECOX

To the Editor:—A woman, aged 36, never married, began scanty menstruation at the age of 14. Until about six months ago she was healthy in every way except that there was only occasional menstruation. She has never suffered headaches or cramps or had any signs of the usual trouble expected with so definite an absence of menstrual flow. She has a sister one year older, who has had the same experience but is married and has one child. The patient developed dementia praecox about six months ago. She was violent and uncontrollable and required morphine and scopolamine with restraint for several weeks. She was given within a month about twenty-five injections of theelin in oil, 2,000 units each. She improved promptly and menstruated a slight amount on one day only, two weeks after the last injection of theelin of that course. She later suffered from terrific headaches, which have continued until the last few days, when they have been relieved by daily injections of 0.5 cc. of gynergen (ergotamine tartrate) supplemented by oral administration of ergotrate, the maleate of the new ergot base (to which the name ergonovine was given by the Council on Pharmacy and Chemistry), made by Eli Lilly. At the present time she is receiving more theelin in the dosage of 10,000 units daily and gynergen occasionally. What is the opinion of this type of medication? Would you suggest more theelin? If so, how much? Would you suggest some corpus luteum? I shall be glad to have any suggestions as to future treatment or advice. M.D., Indiana.

ANSWER.—Not much is known about the specific cause or causes of dementia praecox. It is conceivable that such an illness may result from biologic or psychologic factors or, more likely, both. Proper psychiatric care in addition to injections of endocrine substances would undoubtedly be excellent treatment. Injections of theelin or progynon, the latter given in doses of 2,000 rat units twice a week for a period of about a month, might be tried. Should the patient not improve, insulin or metrazol treatment at a later date might be considered.

"WHITE FINGERS" FROM OPERATING AIR HAMMERS

To the Editor:—I have recently discovered among our employees operating light air hammers a vasospastic condition affecting one or more of the fingers used to guide the hammer. The hammers weigh from 5 to 7 pounds and have a frequency of 3,000 strokes per minute. The vasospasm is noted only when the hand is exposed to cold. This condition has been named stone cutters' disease and pneumatic hammer disease. I should be grateful to you for any information you may have concerning the etiology, pathology and treatment of this condition. Is this a compensable occupational disease? M.D., Michigan.

ANSWER.—This query describes a characteristic industrial disease known as "white fingers." It may be the same as the disease termed "dead fingers," perhaps first described by Loriga in 1911 and later by Barnes of St. Louis. In this country, chief attention to it has been found in Milwaukee, the stone cutting areas of Indiana, and the automobile industry of Detroit. Although in pneumatic hammer work a variety of occupational diseases may arise, in this particular condition the part played by cold is essential. Clearly it may be differentiated from chilblains, neuritis, neuroses, Raynaud's disease, acroparesthesia, erythromelalgia and scleroderma. The chief features of white fingers are the following:

1. It is not symmetrical as a rule.
2. It is limited to workers manipulating vibrating tools under conditions providing exposure to cold.
3. On right-handed persons it usually affects only the fingers of the left hand.
4. It is not associated with pain, redness or edema.
5. There are no sensory changes of a persistent character.
6. No changes occur in the blood vessels.
7. There is absence of muscular weakness, tremors or cramping.
8. It affects only the fingers, usually starting with the index finger on the outer half, and it does not extend up the hand or arm.

This disease and others from which it must be differentiated are well described in the League of Nations' Encyclopedia of Occupation and Health under the section devoted to pneumatic tools. The disease frequently is disabling for customary work and may prevent such other activities as the driving of an automobile. When once well established during a given winter, it may not disappear until the coming of warm weather. Obviously, it may be prevented by the provision of work conditions freed from low temperatures. However, some benefit may be derived from changing the size of the grasped portion of the tool, by cushioning the tool with cork or sponge rubber, and by lowering the rate of vibration. Temporary relief may be procured by massage or by hot water baths. The disease is compensable when disability arises, in all states providing blanket coverage for occupational diseases. In certain states operating under scheduled systems for occupational diseases coverage, compensation might be provided because of liberal interpretation of the unusually included item "compressed air disease." What may take place in the state of Michigan is uncertain, since the new occupational disease law in that state has not led to any considerable number of decisions. However, under Michigan's new occupational disease reporting law, every instance of the condition should be reported.

HEMIATROPHY OF JAW

To the Editor:—A girl about 15 years of age has an inequality in the development of the lower jaw. One side is slightly smaller than the other. So far as I can learn there is no definite known cause for this. I would appreciate some information as to the probable cause and the treatment, if any. M.D., North Carolina.

ANSWER.—Hemiatrophy is a perplexing problem, as its etiology is obscure. It is usually confined to the face either as a whole or principally to the areas supplied by the individual branches of the fifth nerve. There is at times a history of a forceps delivery, but there is little evidence that forceps injury can be the actual cause.

In one case the mother had atrophy of the left side of the face but no other pathologic condition except a malocclusion of the teeth, while her daughter, aged 6 years, had not only typical atrophy of the left side of the face but an adhesion of the tongue to the mandible and side of the pharynx, the left arch of the palate being elevated by the attachment.

Atrophy in general may be from malnutrition, senility, disuse or pressure, but hemiatrophy, whether localized in the face or a complete hemiatrophy of the body, seems to present more evidence of a neuropathic influence. Atrophy of the side of the face occurs at times in lesions of the fifth nerve, in some cranial lesions and wasting of the skeletal muscles in destruction of the anterior cornu of the spinal cord.

Thyroid has been mentioned as being beneficial but in most such cases improvement seems to be quite hopeless.

Benjamin Feinsilver and Herman M. Rosow reported a case of total hemiatrophy in THE JOURNAL, January 29, page 366, and gave a bibliography up to 1932.

PRINTERS' SPRAY AND METHYL ALCOHOL

To the Editor:—A spray which I understand is used generally in the printing trades consists of essentially denatured alcohol, gum arabic and gum tragacanth. Printers breathe this spray and in a room where several sprays are in operation the room is rather foggy with it. The men do not seem to be particularly affected. Over a period of years, may it be injurious to their health? How much danger is there from the denatured alcohol made up in accordance with the formula which contains methyl alcohol as a denaturant? H. G. MURRAY, M.D., Framingham, Mass.

ANSWER.—The trade practice mentioned in this query has come into wide application in offset printing work. In addition to the ingredients mentioned, some use may be made of starch and glycerin. In one recent instance a definite anaphylactic asthma in a printer was traced to the sensitizing action of gum arabic used in these sprays and apparently the difficulty was eliminated by substituting starch for gum arabic. The chief complaints that have arisen center not about the liquid spray but about the dust created, since rapid drying of the spray is essential to the process. This means that the alcohol, with the possible content of 5 per cent methyl alcohol, is quickly evaporated and is present as a vapor. A denaturant of less dangerous nature than methyl alcohol is to be preferred. Additional experience may establish the necessity for the installation of an exhaust system to remove both vapors and dusts in order that printers may not be exposed. If long continued exposure is to be encountered, such systems may be useful as precautionary measures.

RESISTANT UROLOGIC INFECTION

To the Editor:—In attempting to treat with mandelic acid a patient who has consistently shown 2 plus and 3 plus pus in the urine I have never succeeded in securing acidification of the urine greater than a p_H of 6 in spite of large doses of ammonium chloride, which I have used in conjunction with several preparations of ammonium mandelate. I believe that if I could secure acidification of the urine I could expect a decrease in the urinary infection, in view of my results in previous cases. I would appreciate information relative to securing the necessary acidification so essential in mandelic acid therapy. The urinary infection apparently dates back six years to an attack of urinary lithiasis, which necessitated operative removal. Since then he has had periodic attacks of fever associated with urinary symptoms.

ALBERT IRVING CLARK, M.D., Galveston, Texas.

ANSWER.—Such difficulties are frequently encountered. A complete urologic investigation should be carried out in order to eliminate the possibility of any complicating factors prolonging the infection or interfering with proper therapy. Cultures of the urine should be made, as the infecting organism in this case may belong to the genus Proteus, and in such instances

proper acidification to allow the use of mandelic acid is impossible. If after a complete urologic check there are no complicating factors which must be treated first, sulfanilamide therapy may be tried. Two Gm. (40 grain) doses daily for a period of one week out of every three over a period of two months will probably be required. During the administration of this drug the patient should be under the care of the physician and should be observed frequently in order to guard against any untoward reactions. Further study of the urine should be made for the presence of cocci and, if these are present, all foci of infection should be investigated and eradicated if possible. Coccal organisms occasionally respond well to intravenous injections of neoarsphenamine in 0.2 to 0.3 Gm. doses given five days apart, and not more than two injections should be given. The latter drug should never be given while the patient is taking sulfanilamide.

WASSERMANN FAST SYPHILIS

To the Editor:—A white woman aged 22 had mucous patches in January 1934. The Wassermann reaction was 4 plus. She was given injections of neoarsphenamine 0.6 Gm. and bismuth salicylate in oil (amount not known) weekly. The Wassermann test became negative in four months. This treatment was continued until June 1934, when she had a rest period of two months. This was followed by similar treatment until March 1935. The Wassermann reaction remained negative. In November 1936 the Wassermann reaction was 4 plus. She was put on bismuth salicyate in oil 2 cc. weekly for twelve injections and then returned to the bismuth salicylate for a similar course. The Wassermann reaction was then 2 plus. Another course of neoarsphenamine 0.6 Gm., of twelve weekly injections, was followed by a course of bismuth salicylate in oil. The Wassermann reaction was then 3 plus. The patient was put on mapharsen 0.06 Gm. for twelve weeks and is now getting aqueous bismuth subtartrate 3 per cent 1 cc. twice weekly and saturated solution of potassium iodide 15 drops three times a day. The Wassermann reaction is now 4 plus. Spinal fluid examination last month gave entirely negative results. The patient is 5 feet (152 cm.) tall and weighs 99 pounds (45 Kg.). Physical examination, including neurologic, ophthalmologic, cardiac and hepatic tests, give negative results. Since coming under my observation she has had no rest periods. Please outline further treatment. Is the patient infectious? If the patient becomes pregnant and continues treatment, would she deliver a normal, healthy baby? Would you consider her Wassermann fast?

M.D., New York.

ANSWER.—The definition of Wassermann fastness, either in early or in late syphilis, is arbitrary. In early syphilis the term is usually applied to those cases in which the serologic test remains persistently positive under treatment for six months or longer; in late syphilis to those in which the tests remain positive for one year or longer. According to this definition the patient described is Wassermann fast. In all probability the factor accounting for the persistently positive blood Wassermann reaction is the intermittent treatment with interpolated rest periods within the first two years of her infection.

The variation in her Wassermann test since November 1936 from 4 plus to 2 plus, 3 plus and then 4 plus again is of no significance or importance and may be ascribed merely to the fact that the patient has only a small quantity of reagin in her blood.

In all probability and in view of her continuous treatment since November 1936, she is not infectious. If she becomes pregnant and continues treatment throughout the course of her pregnancy, there is nearly absolute certainty that the child would be normal, healthy and nonsyphilitic.

The management of a case such as this was described in detail in an article by Joseph Earle Moore and Paul Padget entitled The Problem of Seroresistant Syphilis, in THE JOURNAL January 8, 1938, page 96.

OPERATIONS FOR CONGENITAL DISLOCATION OF HIPS

To the Editor:—A woman, aged 26, with a bilateral congenital dislocation of the hips, was advised when she was 9 that nothing could be done for her. Have there been any recent surgical procedures which have been used successfully in these cases?

M.D., New York.

ANSWER.—Roentgenograms of the pelvis help materially in determining the appropriate surgical procedure in an individual case. The two chief types of operations that are performed for this condition are (1) the so-called "shelving operations" (which should be "roofing operations") and (2) the so-called bifurcation operations.

Koenig performed a shelf operation for congenital dislocation of the hip in 1891. Ferguson in 1904 and Clarke in 1909 performed similar operations. Albee suggested a bone wedge graft remodeling operation. Mauclaire in 1922 reported the use of osteoperiosteal grafts in forming a shelf. Dickson in 1924 reported five cases in which a wedge of bone from the iliac crest was used to hold the shelf in position. Lance of France reported a similar procedure, with the use of osteoperiosteal grafts to hold the shelf in position. Gill reported a similar procedure. Hey Groves described four different operations to accomplish the same purpose. Spitzy suggested a shelf operation in which the shelf was made from a massive graft from the ilium and the head was held in position by another graft driven into the acetabulum. Soutter fashioned a shelf out of a piece of bone taken from the anterior surface of the neck, trochanter and shaft of the femur, wedging it into the ilium above the head.

In the bifurcation operation usually spoken of as the Lorenz operation (in reality von Baeyer described it earlier) an oblique osteotomy of the femur is performed with the upper end of the cut at the level of the acetabulum. The distal end of the bone is placed in the acetabulum, forming a Y. This operation is used especially in old, irreducible bilateral cases: it restores the anteroposterior equilibrium of the body, thus overcoming lordosis and eliminating pain.

In the bifurcation operation, Putti advises that the lesser trochanter be attached to the proximal fragments.

A good description of the bifurcation operation is given by Rudolph S. Reich in the *Journal of Bone and Joint Surgery* **7**:598 (July) 1925.

DYSMENORRHEA

To the Editor:—A woman, aged 30, married eight years, a nullipara, began menstruation at the age of 14 and has continued regularly every twenty-eight to thirty days. The flow has been moderate. Severe dysmenorrhea has been present always, the pain starting an hour or two before the flow and persisting severely for about twenty-four hours. Relief is obtained only with hypodermic injections of morphine or pantopon. Oral medication has been ineffectual. The pain seems fully as severe as the pain of gallstone colic. Up to six months ago the agonizing pain was the only disorder. For the last six months, however, the patient has been very nervous and feels weak for about a week before and a week after menstruation. The temperature has often been from 99 to 99.6 F. during this time. Twice she fainted about a day after the onset of the menses, and the feeling of impending syncope has become so constant that I keep her supplied with strychnine. The amount and duration of the flow have not changed. About five years ago a dilation and curettement was performed, with no change in symptoms. About ten years ago a nontoxic adenoma of the thyroid was removed. Physical examination is negative throughout and no abnormalities of the pelvic organs were noted. The patient is entirely well for the two weeks between periods. She does not appear to be "nervous" or afraid of pain. The blood, urine, blood chemistry determinations and electrocardiogram are normal. The basal metabolism is minus 20, though the pulse is about 75 to 80. Do you think that any glandular medication is indicated and, if so, what? (I did try antuitrin-S, but it made her "weak and trembly," so I discontinued it.) Would not a surgical menopause be justified, in view of the years of suffering that seem to portend? Is there any danger in using x-rays to induce the menopause? I would appreciate your advice as to specific directions in treatment.

M.D., N. Y.

ANSWER.—The medication of severe dysmenorrhea is often unsatisfactory. This is due to the fact that the cause of painful menstruation is often difficult to determine. One should always consider the possibility of endometriosis in patients who have had symptoms of long standing. Allergic conditions are responsible for dysmenorrhea in some cases (Schwarz, Otto, and Smith, Dudley: Essential Dysmenorrhea and Allergy, *Am. J. Obst. & Gynec.* **33**:331 [Feb.] 1937).

The only endocrine preparation which has been found to be of value in some cases of dysmenorrhea is progestin. This will cause the relaxation of the uterine musculature so that patients may be benefited in whom excessive uterine motility is the cause of the dysmenorrhea. Progesterone can be given in doses of 1 rabbit unit on each of three days prior to the onset of menstruation. It is sometimes advisable to give 2 rabbit units the days the menses begin. Of course, this therapy will have to be repeated each month in order that the patient may continue to obtain relief by means of the medication. Antuitrin-S is probably of no value for this purpose.

It is almost never justifiable to consider either a surgical or an irradiation menopause for dysmenorrhea in a woman of 30. The sudden climacteric may prove to be stormy. Furthermore, few women reconcile themselves to the premature termination of their reproductive period. Possibly parasympathectomy rather than an artificial menopause should be considered in stubborn cases that resist all other forms of treatment. There is no great danger in inducing the premature menopause by x-rays when this measure is indicated. The surgical approach, however, is to be performed in young women because a hysterectomy can be done and the ovaries and tubes can be left behind, thereby preventing the immediate onset of the climacteric. The surgical approach likewise would rule out the possibility of a pathologic condition which might be responsible for the severe dysmenorrhea.

Medical Examinations and Licensure

COMING EXAMINATIONS

STATE AND TERRITORIAL BOARDS

Examinations of state and territorial boards were published in THE JOURNAL, June 25, page 2174.

NATIONAL BOARD OF MEDICAL EXAMINERS

NATIONAL BOARD OF MEDICAL EXAMINERS: *Parts I and II.* Examinations will be held in all centers where there is a Class A medical school and five or more candidates who wish to write the examination, Sept. 12-14. Ex. Sec., Mr. Everett S. Elwood, 225 S. 15th St., Philadelphia.

SPECIAL BOARDS

AMERICAN BOARD OF INTERNAL MEDICINE: *Written examination* will be held at various centers of the United States and Canada, Oct. 17. *Final date for filing applications is Sept. 1.* Chairman, Dr. Walter L. Bierring, 406 Sixth Ave., Suite 1210, Des Moines, Iowa.

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY: *Written examination for Group B candidates* will be held in various states of this country and Canada, Nov. 5. Sec., Dr. Paul Titus, 1015 Highland Bldg., Pittsburgh (6).

AMERICAN BOARD OF OPHTHALMOLOGY: Washington, D. C., Oct. 8, and New York, Oct. 7. *All applications should be filed immediately and case reports, in duplicate, must be filed not later than sixty days before the date of examination.* Sec., Dr. John Green, 3720 Washington Blvd., St. Louis, Mo.

AMERICAN BOARD OF PEDIATRICS: Detroit, October 26; Rochester, N. Y., November 13; and Oklahoma City, November 15. Sec., Dr. C. A. Aldrich, 723 Elm St., Winnetka, Ill.

California Reciprocity and Endorsement Report

Dr. Charles B. Pinkham, secretary, California State Board of Medical Examiners, reports fifty-six physicians licensed by reciprocity and thirteen physicians licensed by endorsement from Jan. 3 through March 31, 1938. The following schools were represented:

School	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
University of Arkansas School of Medicine		(1920)	Arkansas
Stanford University School of Medicine		(1934)	Minnesota
University of Colorado School of Medicine		(1933), (1936, 2)	Colorado
Yale University School of Medicine		(1921)	New York, (1930) Penna.
George Washington University School of Medicine		(1927)	New York
Georgetown Univ[e]rsity School of Medicine		(1923)	Minnesota
Emory University School of Medicine		(1936)	Georgia
University of Georgia Medical Department		(1931)	Georgia
Northwestern Univ. Medical School		(1932)	Minnesota, (1936) Utah
Rush Medical College		(1927)	Illinois, (1934) New York
School of Med. of the Division of Biological Sciences		(1934)	Illinois
University of Illinois College of Medicine		(1935)	Illinois
Indiana University School of Medicine		(1933)	Indiana
State University of Iowa College of Medicine		(1931), (1933)	Iowa
University of Kansas School of Medicine		(1936)	Kansas
Medical School of Maine		(1910)	Maine
Johns Hopkins University School of Medicine		(1930)	Maryland
University of Maryland School of Medicine and College of Physicians and Surgeons		(1936)	Maryland
Tufts College Medical School		(1920)	Mass.
Detroit College of Medicine and Surgery		(1928), (1929)	Michigan
University of Michigan Medical School		(1934)	Michigan
University of Minnesota Medical School		(1932, 2), (1928)	Minnesota
Washington Univ. School of Medicine		(1904), (1913), (1934)	Missouri
Creighton University School of Medicine		(1932)	Nebraska, (1935) New Jersey, (1936) Arizona, Kansas
University of Nebraska College of Medicine		(1933, 2)	Nebraska
Columbia Univ. College of Physicians and Surgeons		(1922)	New York
New York Homeopathic Medical College and Flower Hospital		(1935)	New York
Ohio State University College of Medicine		(1932)	Ohio
University of Oklahoma School of Medicine		(1933)	Oklahoma
University of Oregon Medical School		(1929)	Oregon, (1932) Washington
Jefferson Medical College of Philadelphia		(1930)	Penna.
Temple University School of Medicine		(1933, 2)	Penna.
University of Pennsylvania School of Medicine		(1927)	S. Dakota
Medical College of the State of South Carolina		(1904)	S. Carolina
Vanderbilt University School of Medicine		(1928), (1931)	Tennessee
University of Manitoba Faculty of Medicine		(1928)	N. Dakota
University of Durham College of Medicine, England		(1924)*	Minnesota
Licentiate of the Royal College of Physicians of Ireland and Licentiate of the Royal College of Surgeons in Ireland		(1923)	Michigan

School	LICENSED BY ENDORSEMENT	Year Grad.	Endorsement of
College of Medical Evangelists		(1935)	N. B. M. Ex.
Columbian University Medical Department		(1893)	U. S. Navy
George Washington University School of Medicine		(1935, 2)	N. B. M. Ex.
Georgetown University School of Medicine		(1915)	U. S. Navy
Harvard University Medical School		(1930), (1932), (1933)	N. B. M. Ex.
St. Louis University School of Medicine		(1934)	N. B. M. Ex.
Western Reserve University School of Medicine		(1926)	U. S. Navy
Vanderbilt University School of Medicine		(1933)	N. B. M. Ex.
University of Vermont College of Medicine		(1933)	N. B. M. Ex.
McGill University Faculty of Medicine		(1934)	N. B. M. Ex.

* License has not been issued.

Rhode Island January Examination

Mr. Robert D. Wholey, chief, Division of Examiners, reports the oral, written and practical examination held by the Board of Examiners in Medicine at Providence, Jan. 6-7, 1938. The examination covered twenty subjects and included fifty questions. An average of 80 per cent was required to pass. Seven candidates were examined, all of whom passed. Five physicians were licensed by endorsement after an oral examination. The following schools were represented:

School	PASSED	Year Grad.	Per Cent
State University of Iowa College of Medicine		(1934)	91
Boston University School of Medicine		(1935)	86
Harvard University Medical School		(1936)	87, 89
Long Island College of Medicine		(1936)	80
Vanderbilt University School of Medicine		(1930)	92
Regia Università degli Studi di Roma. Facoltà di Medicina e Chirurgia		(1935)	90

School	LICENSED BY ENDORSEMENT	Year Grad.	Endorsement of
Georgetown University School of Medicine		(1935)	N. B. M. Ex.
University of Maryland School of Medicine and College of Physicians and Surgeons		(1936)	N. B. M. Ex.
Boston University School of Medicine		(1936)	N. B. M. Ex.
University of Nebraska College of Medicine		(1926)	N. B. M. Ex.
Syracuse University College of Medicine		(1934)	N. B. M. Ex.

Colorado January Report

Dr. Harvey W. Snyder, secretary, Colorado State Board of Medical Examiners, reports the written examination held at Denver, Jan. 5-7, 1938. The examination covered 8 subjects and included 165 questions. An average of 75 per cent was required to pass. Six candidates were examined, all of whom passed. Eight physicians were licensed by endorsement. The following schools were represented:

School	PASSED	Year Grad.	Per Cent
University of Colorado School of Medicine		(1936)	80
Northwestern University Medical School		(1937)	81, 83
Friedrich-Wilhelms-Universität Medizinische Fakultät, Berlin		(1903)	78
Osteopaths*		75.5,	82

School	LICENSED BY ENDORSEMENT	Year Grad.	Endorsement of
College of Medical Evangelists		(1936)	Washington
State University of Iowa College of Medicine		(1933)	Iowa
Tulane University of Louisiana School of Medicine		(1921)	New York
University of Michigan Medical School		(1934)	Michigan
Washington University School of Medicine		(1932)	Missouri
University of Nebraska College of Medicine		(1936, 2)	Nebraska
Columbia Univ. College of Physicians and Surgeons		(1913)	Missouri

* Licensed to practice medicine and surgery.

Oregon Reciprocity and Endorsement Report

Dr. Joseph F. Wood, secretary, Oregon State Board of Medical Examiners, reports three physicians licensed by reciprocity and two physicians licensed by endorsement from Feb. 17 through May 6, 1938. The following schools were represented:

School	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
State University of Iowa College of Medicine		(1936)	Iowa
University of Nebraska College of Medicine		(1927)	Nebraska
University of Pennsylvania School of Medicine		(1927)	S. Dakota

School	LICENSED BY ENDORSEMENT	Year Grad.	Endorsement of
University of Michigan Medical School		(1932)	N. B. M. Ex.
University of Oregon Medical School		(1934)	N. B. M. Ex.

Georgia Reciprocity and Endorsement Report

Mr. R. C. Coleman, joint-secretary, State Examining Boards, reports nine physicians licensed by reciprocity and one physician licensed by endorsement from Jan. 1 through June 15, 1938. The following schools were represented:

School	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
Howard University College of Medicine		(1935)	Virginia
University of Louisville School of Medicine		(1936)	Kentucky
Tulane University of Louisiana School of Medicine		(1931)	N. Carolina
Western Reserve University School of Medicine		(1933)	Ohio
Jefferson Medical College of Philadelphia		(1926)	Ohio
Medical College of the State of South Carolina		(1935)	S. Carolina
University of Tennessee College of Medicine		(1937)	Tennessee
Medical College of Virginia		(1930)	Penna.
University of Virginia Department of Medicine		(1930)	Virginia

School	LICENSED BY ENDORSEMENT	Year Grad.	Endorsement of
Harvard University Medical School		(1933)	N. B. M. Ex.

Book Notices

New and Nonofficial Remedies, 1938, Containing Descriptions of the Articles Which Stand Accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1938. Cloth. Price, $1.50. Pp. 590. Chicago: American Medical Association, 1938.

Perhaps the most noteworthy feature of the 1938 edition of New and Nonofficial Remedies is the revision of the chapter on vitamin preparations to bring to date the valuable list of "allowable claims." As knowledge increases with the isolation of the crystalline vitamins and experimentation with them, greater simplification may be expected. One notes the addition in this volume of riboflavin (vitamin B_2 or G), and it is understood that thiamin chloride (vitamin B_1) will be in the next edition.

Other new substances described in this volume are sulfanilamide and protamine zinc insulin, with the accepted brands. The proved value of these new additions to the physician's armamentarium bids fair to make the past year a milestone in therapeutic progress. The Council is to be congratulated on the promptness with which it evaluated these drugs and established standards for their adequate control. From the first the Council warned against using sulfanilamide in untried combinations. The sad tragedy of the deaths from the rashly introduced Elixir of Sulfanilamide-Massengill starkly emphasizes the value of such a body as the Council to the medical profession and the pharmaceutical manufacturers as well as to the public. Of course this potential value cannot become effective as long as those concerned refuse to follow the Council in the use of new remedies.

Other noteworthy new drugs which appear in New and Nonofficial Remedies 1938 are avertin with amylene hydrate, vinethine, pontocaine hydrochloride, basal, general and local anesthetics respectively; mandelic acid, a new urinary antiseptic; novatropine and syntropan, synthetic mydriatics.

Among the products omitted from this year's volume, of which there is about the usual number, either for conflict with the rules or as being off the market, are all the creosote and guaiacol preparations that have stood accepted for so many years. In a careful revaluation of these preparations extending over two or three years the Council came to the conclusion that they should be relegated to the therapeutic scrap heap, at the same time announcing that the matter would be reconsidered if and when interested manufacturers could present new and convincing evidence.

No review of an annual volume of New and Nonofficial Remedies would be complete without a word of praise and appreciation for the Council, the tireless and freely given labor of whose members makes possible this valuable manual of therapeutic progress.

Bienengift als Heilmittel. Von Dr. Robert Schwab, innere Abteilung des Julius-Hospitals in Würzburg. Boards. Price, 2.40 marks. Pp. 48, with one illustration. Leipzig: Georg Thieme, 1938.

Bee venom is recommended in the warfare against rheumatism, a disease so common as to exceed even tuberculosis (12 per cent as against 10 per cent in 1931). This remedy, known to popular medicine for thousands of years, has only of late been employed by physicians and, it seems, with a certain degree of success. The original method of employment was the bee sting as a result of the ancient observation that bee keepers became immune not only to bee stings but also to rheumatism. It seems, on the other hand, that the patient with rheumatism is a priori immune against the bee stings (primary negative phase). It is only after several stings that the local reactions occur (secondary positive phase), which is followed by a secondary negative phase, and it is during this that it is claimed the healing occurs. The suggestion is advanced that rheumatism, which is an allergic reaction, may be favorably influenced by the induction in this manner of a refractory phase, which may be of value also in other allergic conditions, such as hay fever. Bee poison has been produced in relatively pure form and made available in dilutions for administration by injection and of late also in ointment form. This salve, the exact composition of which is not given, is said to contain minute crystals which on inunction damage the skin sufficiently to permit percutaneous absorption. The penetration is improved by means of iontophoresis and still more by the additional employment of histamine. One naturally wonders whether this combination of bee poison with histamine, iontophoresis, which in itself is claimed to be useful in rheumatism, may not be an admission that the results secured by the bee poison alone are not entirely satisfactory.

The Diagnosis and Treatment of Sexual Disorders in the Male and Female Including Sterility and Impotence. By Max Huhner, M.D., Attending Genitourinary Surgeon, Bellevue Hospital, Out-Patient Department, New York City. Cloth. Price, $5. Pp. 490, with illustrations. Philadelphia: F. A. Davis Company, 1937.

The book called "Disorders of the Sexual Function," first published by this author in 1917, was reprinted eleven times between 1917 and 1921. The second revised edition was reprinted ten times up to 1929, when the third edition was published. The present work is not a revision but an entirely new work, largely because of the great discoveries that have been made in the field of sexual disorders during the past twenty-five years. Today these disorders lie midway between pure neurology and psychiatry and pure genito-urinary pathology. In the present book the entire subject of impotence has been rewritten. There are discussions of the Steinach operation, the influence of the endocrine system, the freudian point of view and similar subjects. There is also a new discussion on masturbation and of sterility and an abundant bibliography. Several contributions made by the author to various systems of medicine have also been developed into portions of this book. The volume is organized to include sterility, impotence, masturbation, pollutions, priapism, continence, sexual neuroses, enuresis, frigidity and many similar subjects. The book is based on a large practical experience and on a conservative attitude toward unestablished theories. It is among the most useful for the average physician who is occasionally concerned with such cases.

Practical Procedures. Edited by Sir Humphry Rolleston, Bt., G.C.V.O., M.D., and Alan A. Moncrieff, M.D., F.R.C.P. With a preface by Sir David Wilkie, O.B.E., M.D., M.Ch. Published on behalf of The Practitioner. Cloth. Price, 10s. 6d. Pp. 293, with 66 illustrations. London: Eyre and Spottiswoode, Ltd., 1938.

This volume of the Practitioner handbook series is decidedly welcome, as it covers the borderland between medicine and surgery in a territory in which the well trained practitioner finds his most interesting and fruitful field. The aim of this book is to deal with practical procedures in a simple but detailed manner by experts who have experienced the pitfalls. It includes such items as plaster-of-paris technic, administration of fluids by injection, technic for blood transfusion, pleural aspiration, use of the catheter, injection treatment, local anesthesia and various topics of clinical laboratory diagnosis. It should be of real help to many a physician in need of such practical information and most especially to hospital interns and residents. Indeed, no hospital library should be without this little volume.

The Carnegie Foundation for the Advancement of Teaching. Thirty-Second Annual Report. Paper. Gratis. Pp. 202. New York City, 1937.

In the thirty-second annual report of the Carnegie Foundation, President Walter A. Jessup discusses the intensive competition now carried on between colleges for the recruiting of students. "We are familiar with the 'inducements' offered to promising athletes, but we may be astonished by the fact that drum majors and tuba players now find themselves possessed of special talents with a marketable value in the college field. Jobs and scholarships are dangled before the eyes of impecunious high school pupils. Fraternities and sororities vie in recruiting students who can pay their bills and bring glory (in press notices) to a chapter. The evil thread which runs through the fabric of recruitment devices is the attempt through them to exploit the student."

"Many institutions," continues Dr. Jessup, "today are giving renewed serious consideration to the selection of students adapted to their particular programs. The right selection of students, in accordance with a clear and understood institutional purpose, benefits not only the university or college that employs it but every undergraduate fortunate enough to enjoy its privileges. . . .

"The president of a small college recently said 'We know that we are accepting students who cannot do our work. We know that we are carrying these students forward to gradua-

tion. In our present situation we are under such pressure that we feel we have no other choice. Our campus morale is affected by numbers and a reduction in attendance is looked upon as a slump—as though the institution were losing ground.'"

Dr. Jessup writes "No college can be free from the necessity of competing with other institutions. The means adopted have perforce included some consideration of the relation of the college to the general public, for the typical college, beset on every hand with competition, must vie with its neighbors for public approval. In consequence, it has adopted devices common to other competitive social and economic enterprises. It has changed the nature of its catalogue. It has employed publicity agents. It has pressed its alumni into service as recruiting officers. It has issued neat and none too modest printed matter to attract students. Its 'follow-up' system is often very efficient indeed. And it has deemed itself forced to do these things by a feeling that it must struggle if it is to survive and go forward."

The report contains a description of the purposes and activities of the foundation from its establishment in 1905 by Andrew Carnegie to the present day. It has disbursed more than $32,769,900 for retiring allowances and widows' pensions in 168 colleges, universities and technical schools in the United States and Canada, for 2,621 individuals comprising 1,752 retired teachers and officers and 869 widows. The foundation has conducted numerous educational inquiries, some of the results of which have been published in twenty-eight bulletins, thirty-two annual reports and twenty-seven miscellaneous publications, comprising altogether some 15,000 printed pages.

Of the institutions which since 1905 have received from the Carnegie Foundation more than $32,000,000 for retiring allowances and widows' pensions, Harvard University has had more than $2,690,000, Columbia University $2,341,000, Yale University $2,042,000, Cornell University $1,500,000, the University of Michigan $1,075,000, the University of California $927,000, the University of Toronto $908,000, the University of Wisconsin $786,000 and Princeton University $744,800.

Copies of this report and any of the other publications of the foundation now in print may be had without charge on application by mail or in person to the office of the foundation at 522 Fifth Avenue, New York.

Bibliographie der Luftfahrtmedizin: Eine Zusammenstellung von Arbeiten über Luftfahrtmedizin und Grenzgebiete bis Ende 1936. Von Dr. Med. Ingeborg Schmidt, Leiterin der Bücherei und Assistentin am Luftfahrtmedizinischen Forschungsinstitut des Reichsluftfahrtministeriums Berlin. Paper. Price, 14 marks. Pp. 136. Berlin: Julius Springer, 1938.

This small volume in paper cover constitutes a comprehensive and excellent bibliography of aviation medicine, including 1936. Since the World War this newer specialty in medicine has kept abreast of the rapid expansion of aviation throughout the world, and research in the various phases has resulted in a rather heterogeneous literature. The compilation of a bibliography is timely and most serviceable to those interested in further studies of the medical aspects of aviation. The present work is divided into subheads including general considerations, psychophysiology of flight, altitude effects, atmospheric pressure, wind, cold, light and gravitational effects, diseases and injuries peculiar to flying, and the various aspects of hygiene and sanitation of aviation. It is catalogued by authors and lacks a cross subject index. This deficiency is of minor importance and should not keep the book from the reference shelves of flight surgeons and others interested in aviation medicine.

Collected Papers on Tuberculosis. By Sir Robert W. Philip, M.A., M.D., LL.D., Extra Physician to His Majesty the King in Scotland. Cloth. Price, $7.50. Pp. 460. New York & London: Oxford University Press, 1937.

This volume of twenty-four collected essays and papers on tuberculosis comes from the pen of one whose medical career spans the era of modern knowledge of the disease. In the development of this knowledge and the means of controlling tuberculosis, the author has taken a prominent part by his pioneer work in the establishment of clinics and dispensaries for the study of the disease, methods of case finding, agitation for compulsory notification of active cases, and tuberculinotherapy. A graduate of medicine in the year that Koch announced the discovery of the causative organism of tuberculosis, the author became interested in the subject because of a demonstration of the bacilli while working in Vienna in 1882-1883. Fired with enthusiasm by the new vistas thus opened, he returned to Edinburgh to meet apathy and indifference. "Everybody knew everything that was to be known about tuberculosis. It was a worked-out subject, and the outlook on prevention and treatment was correspondingly hopeless." A desire to establish a center for the collection, grouping and observation of cases at various stages of the disease led to the establishment in 1887 of the first tuberculosis clinic, the Victoria Hospital for Consumption. His first report on the prevention and cure of the disease before the British Medical Association in 1896 was deemed of so little significance that mention of it was omitted from the printed transactions. In 1890 he advocated compulsory notification of active cases, a fundamental step in the control of the disease which was not enacted into law until 1912. In 1928 Professor Philip was awarded the Trudeau Medal of the National Tuberculosis Association, the first foreigner to be so honored. To those interested in the subject of tuberculosis, the essays provide a delightfully written historical retrospect.

Weiteres über Geschwülste. Von K. A. Helberg. Paper. Price, 2.50 Danish kroner. Pp. 56, with 19 illustrations. Copenhagen: Levin & Munksgaard; Leipzig: Georg Thieme, 1938.

This booklet contains six brief discussions on certain points, mainly morphologic, connected with basal cell carcinoma of the skin; nevi, nevocarcinoma, carcinoids; hemangioma, telangiectatic granuloma and Kaposi's sarcoma; the thyroid; lymphogranulomatosis, and the cellular and nuclear dimensions in carcinoma. Clinical diagnosis and treatment are not considered.

Pseudocyesis. By George Davis Bivin, Ph.D., and M. Pauline Klinger, M.A. A Monograph of the George Davis Bivin Foundation. Cloth. Price, $4. Pp. 265, with 5 illustrations. Bloomington, Indiana: The Principia Press, Inc., 1937.

Neither of the authors of this book is a physician. Bivin was a psychologist interested primarily in abnormal psychology who established the Medical-Psychology Research Institute, now called the George Davis Bivin Foundation, Inc., associated with the Indiana University. Apparently spurious pregnancy has been recognized since the earliest times, and it is reported that the hippocratic volumes showed at least twelve cases around 300 B. C. The famous cases include, for example, the one of Mary Tudor, queen of England. The authors have collected records of cases throughout the world, many of them not only interesting scientifically but also having extraordinary elements of humor. It is interesting that the work should have been prepared without medical consultation, since the aspects of these cases are as much medical as psychologic. In the concluding pages the evidence of similar cases among cats, cows and dogs is offered.

Malnutrition: The Medical Octopus. By John Preston Sutherland, M.D., Sc.D. Cloth. Price, $3. Pp. 368. Boston: Meador Publishing Company, 1937.

This book is not worth the serious consideration of the medical profession. The author explains that it was written in answer to the questions "Why do I eat?" and "What shall I eat?" The explanation covers 368 pages. One of these pages, near the end of the book, contains a summary of some of the inaccuracies and curious bits of misinformation, which in one way or another the book provides in abundance, under the heading "Fundamental Prohibitions." These include "Do not eat white flour in any form whatever" and "do not eat cane or beet sugar in or on anything." The author specifically admonishes the reader not to eat cream of wheat, polished rice, cakes, pies, puddings, ice cream, pared potatoes in any form, or the majority of cereal breakfast foods. These blanket prohibitions are just as ridiculous as the author's belief that cow's milk is not entirely suitable as a food for human beings and that "its free use probably is more injurious than beneficial to mankind." The jacket of the book contains laudatory comments by Dr. Percy R. Howe, Sir W. Arbuthnot Lane, Senator Royal S. Copeland and others. The comments do not indicate whether these individuals eat their potatoes with the skins on or whether they believe with the author that nuts may be taken freely and in any variety.

Essentials of Prescription Writing. By Cary Eggleston, M.D., Assistant Professor of Clinical Medicine, Cornell University Medical College, New York City. Sixth edition. Cloth. Price, $1.50. Pp. 155. Philadelphia & London: W. B. Saunders Compnay, 1938.

In his preface the author speaks of the revision having become necessary by the eleventh edition of the U. S. Pharmacopeia and the sixth edition of the National Formulary. The author has seen fit to omit iso-alcoholic elixir, which by many is considered an important addition to the group of vehicles. Syrup of cherry, which is official in the National Formulary, is spoken of as being nonofficial. Such and similar minor inaccuracies are rather regrettable in a book the avowed purpose of which is to teach correct prescription writing. Otherwise the booklet meets the requirements well. It stresses prescription writing in Latin.

Die tierischen Parasiten des Menschen. Von Dr. Walter Stempell, Hon.-Professor der Zoologie, vergleichenden Anatomie und vergleichenden Physiologie an der Westfälischen Wilhelms-Universität zu Münster i. W. Paper. Price, 12 marks. Pp. 226, with 219 illustrations. Jena: Gustav Fischer, 1938.

Because there has existed in the German language no short and practical publication on the animal parasites, the author has prepared this volume. It is intended as a ready reference for the physician rather than the parasitologist, containing brief paragraphs about the various animal parasites that infest man. The less significant forms are described in fine print, while those of greater medical importance are printed in larger type, together with a certain amount of clinical material. The book is divided into six parts. The first part, of eleven pages, discusses parasitism in general; the main part, of nearly 200 pages, takes up the protozoa, the worms and the arthropods; the third part presents an index to parasites infesting the different parts of the body, such as the muscle, the blood, the skin and the intestinal canal. The remainder of the book is devoted to a chronologic list of literature on parasitology, to a table of corrections for errors that appear in the text, and to the alphabetical index.

Surgical Pathology of the Diseases of the Neck. By Arthur E. Hertzler, M.D., Surgeon to the Agnes Hertzler Memorial Hospital, Halstead, Kansas. Hertzler's Monographs on Surgical Pathology. Cloth. Price, $5. Pp. 237, with 206 illustrations. Philadelphia, Montreal & London: J. B. Lippincott Company, 1937.

This is a fairly brief monograph reflecting the author's experience with various diseases of the neck. He expresses himself freely on controversial subjects but not always with the greatest clarity. Apparently most of the information contained in this monograph is from the author's personal experience and includes chapters on Hodgkin's disease, lymphosarcomas and rare primary tumors of the neck. There is a section of inflammatory lesions of the neck which is too brief and skimpy on such afflictions as actinomycosis. On the difficult problem of metastases to the lymph nodes of the neck, no mention is made of tumor grading according to histology as a guide to further therapy. The author does deplore the failure to make biopsies of lesions treated with irradiation and points to the pitfalls to which this may lead. As can be expected, most of the material presented is such as is seen by the surgeon clinically and grossly rather than actual pathologic tissue after it has left the body.

Manual of Human Dissection. By Edwin M. Shearer, Ph.D., Associate Professor of Anatomy, New York University College of Medicine, New York. Cloth. Price, $4.25. Pp. 321, with 79 illustrations by the author. Philadelphia: P. Blakiston's Son & Co., Inc., 1937.

This is a good laboratory guide for dissection. It is good because it does not include either a textbook or an atlas and because it leaves out structures of small importance. The time allotted dissection to the curriculum of the ordinary school of medicine in America is less than it once was. It permits thorough dissection and study of only some structures. The student needs guidance in picking out those most worthy of thorough study from the point of view of clinical medicine. This book gives such guidance well and sufficiently. It can be recommended as better than the longer laboratory guides formerly used when the student had a longer time for dissection. The binding is excellent and will stand use in dissecting rooms.

On Deficiency of A Vitamin and Visual Dysaptation. II. By C. Edmund and Sv. Clemmesen. Paper. Price, 3 kroner. Pp. 52, with 5 illustrations. Copenhagen: Levin & Munksgaard; London: Oxford University Press, 1937.

By the power of distinction method, in which the discriminability of letters of different degrees of contrast is determined at various illuminations, Edmund and Clemmesen examined the adaptation faculty (aptation) of the retina in a group of pregnant medical patients and concluded that the number of cases of dysaptation in this class of patients had decreased during the past year, probably because of the popular agitation concerning vitamins stirred up by the press and as a result of the vitaminization of margarin. A nine months investigation of a selected group of prisoners in the state prison in Nyborg was done by the same method to determine the adequacy or inadequacy of the prison diet with respect to vitamin A. It was concluded that a diet containing 1,374 international units of vitamin A daily is adequate to obliterate seasonal oscillations in the power of distinction. The ordinary prison diet (1,225 units daily) is insufficient for this purpose and should be supplemented with sweet milk, although rarely does actual dysaptation occur with this diet.

Pavlov and His School: The Theory of Conditioned Reflexes. By Professor Y. P. Frolov, M.D., Member of the All Union Institute of Experimental Medicine, Moscow. Translated from the Russian by C. P. Dutt, B.A. Cloth. Price, $4. Pp. 291, with 26 illustrations. New York: Oxford University Press, 1937.

Biographic information, a concise account of the theory of conditioned reflexes, a record of the work of the predecessors of Pavlov on which his studies were based and a description of his methods of work and of his school are offered by this volume. The author, who was a student of Pavlov, first wrote the work in Russian, and the translation is by C. P. Dutt. Out of the years of his study and research, Pavlov summed up the basic qualities of mind indispensable to a scientist. As these were finally formulated they were published posthumously and are certainly worthy of repetition:

What is it that I would wish the young men and women of my country who have dedicated themselves to science?

First of all, consistency. Of this very important condition of fruitful scientific work I can never speak without emotion. Consistency, consistency and again consistency. From the very beginning of your work train yourself to strict consistency in the acquirement of knowledge.

Learn the A B C of science before you attempt to scale its peaks. Never embark on what comes after without having mastered what goes before. Never try to cover up the gaps in your knowledge, even by the boldest guesses and hypotheses. Such a bubble may delight your eyes by its play of colors, but it will inevitably burst and you will be left with nothing but confusion.

Train yourself to reserve and patience. Learn to do the heavy work that science involves. Study, compare, accumulate facts. Be the wing of a bird never so perfect, it would never bear her aloft without the support of the air. Facts are the scientist's air, without which he would never be able to fly. Without facts, your theories are labor in vain.

But in studying, experimenting and observing try not to remain at the surface of the facts. Do not turn yourself into a museum custodian of facts. Try to penetrate into the secret of their origin. Steadfastly seek the laws that govern them.

The second thing is modesty. Never think that you already know everything. And however high the esteem in which you are held, always have the courage to say to yourself "I am ignorant."

Do not allow pride to take possession of you. It will cause you to be obstinate when you should be conciliatory. It will cause you to reject useful advice and friendly help. It will prevent you from taking an objective view.

In the collective which I have to guide, everything depends on the atmosphere. We are all harnessed to a common cause and each of us helps it forward to the extent of his strength and possibility. With us it is often impossible to distinguish what is "mine" and what is "yours." But our common cause only gains thereby.

The third thing is passion. Remember that science demands a man's whole life. And even if you had two lives, it would not be enough. Science demands from man great intensity and deep passion. Be passionate in your work and searchings.

Our fatherland is opening wide prospects before scientists and—it must be owned—science is being fostered in our country with the utmost lavishness.

What should I say of the position of the young scientist in our country? Is not everything quite clear here? Much is given him, but much is asked of him. For youth, as for us, it is a matter of honor to justify the great trust that our fatherland puts in science.

Among the most interesting of the chapters is that dealing with Pavlov at home. He had a fixed routine of life. He was left handed. His favorite outdoor game was skittles, indoor game solitaire. He relaxed by looking at his collection of pictures or by listening to his favorite airs on the phonograph. He was particularly fond of the writings of Goethe and Shake-

speare, but he spent little time reading outside his field of science. He slept from 1:30 a. m. to 7:30 a. m. as a rule. The final plate in the book is a picture of the great master on the platform at the fifteenth International Congress of Physiologists in August 1935.

Die Operation in der Sprechstunde. Von Dr. Richard Goldhahn, Chefarzt des Kreiskrankenhauses in Liegnitz. Boards. Price, 6.80 marks. Pp. 181, with 68 illustrations. Leipzig: Georg Thieme, 1938.

This small volume contains a great deal of valuable information and guidance in the matter of minor surgical procedures. It would seem, however, that it would more truly be an office surgery if the descriptions of extraction of teeth, tracheotomy and suboccipital puncture had been omitted. The author shows a broad knowledge of the surgical literature, to which frequent references are made. The format is excellent; the illustrations are only average.

Meditatio Medici: A Doctor's Philosophy of Life. By W. Cecil Bosanquet, D.M., F.R.C.P. Cloth. Price, 7s. 6d. Pp. 162. Aldershot: Gale & Polden, Limited, 1937.

On the basis that every man should be his own philosopher, a distinguished physician here presents his own philosophy of life. He comes to the conclusion that the essence of civilization is the equalization of conditions for all members of a community so that those less favored by nature are artificially protected and preserved, and that western civilization tends in many ways to encourage and promote mediocrity and inefficiency rather than strength and ability. As a result, he sees only gradual decline of human vigor among European races. He is convinced that the hope of gaining something for himself and his family is man's chief spur to human action and that any interference with this spur will bring about stagnation. Stagnation invariably involves degeneration. A final paragraph sums up Bosanquet's concept of a well ordered evolution:

> Perhaps, then, we may congratulate ourselves on a remnant of sinfulness in our own generation, in whom the love of combat is not quite extinct; for whom absolute social equality for all is not yet established; who have still some prizes to struggle for and some difficulties to overcome. We may even hope that the same opportunities for the display of energy may be afforded to many generations yet of those who come after us. The desire for rest and repose is natural and right, but only after labor. We can all echo the prayer for peace and good fellowship with neighboring nations; but nature knows nothing of peace, only endless conflict and rivalry among living creatures, and her laws are binding on mankind as well as on lower forms. The saying of the old Greek philosopher Heracleitus that "Conflict is the Father of all things" represents the creed of the evolutionist that only by struggle and rivalry—not necessarily by arms and bloodshed, but by emulation at any rate in the arts of commerce, industry and invention—is that progress possible to mankind which is the sole alternative to stagnation, degeneration and decay.

The Evolution of Chronic Rheumatism with Treatment to Correspond. The Preventive Clinic as a First Line of Defence. By R. Fortescue Fox, M.D., F.R.C.P. Founded on a lecture delivered at Margate, at the Congress of The Royal Institute of Public Health and The Institute of Hygiene, May, 1937. Paper. Price, 2s. 6d. Pp. 26, with 5 illustrations. London: H. K. Lewis & Co., Ltd., 1938.

This little pamphlet by one of the most eminent English students of rheumatism enters a brief plea for a broad view on the etiology and treatment of rheumatic diseases. In it appears a brief discussion of certain phases of physical therapy, especially with regard to the advantages of warmth in treatment and the serious dangers of chill and cold. While in no sense a comprehensive report in the field, it reflects some of its distinguished author's views.

Dr. Bodo Otto and the Medical Background of the American Revolution. By James E. Gibson. Cloth. Price, $4. Pp. 345, with illustrations. Springfield, Illinois, & Baltimore: Charles C. Thomas, 1937.

Dr. Bodo Otto and his family arrived in Philadelphia in 1755. In a German newspaper, two months after the arrival, appeared an announcement as to his qualifications in medicine and offering his services to those who were ill. Dr. Bodo Otto served in the hospitals in connection with the Revolutionary War during the years 1776-1782, between the age of 65 and 72 years. His sons also served during the war, one of them in the double capacity of commander of a New Jersey regiment and as a physician. Around his work and his career, James E. Gibson has drawn a picture of medical service during the Revolutionary War, illustrated with original documents and recounting again the services of Morgan, Benjamin Rush, Shippen and others. Dr. Bodo Otto was in command of the hospital in Philadelphia located on the square bounded by Eleventh, Twelfth, Spruce and Pine streets. One chapter deals with the famous controversy between Benjamin Rush and Shippen and provides a record of Shippen's trial and acquittal. Dr. Bodo Otto alined himself with Shippen as against Rush and Morgan. At the end of his six years of service he found himself without funds, and he accepted an offer from the Congress of the United States of two years' full pay in lieu of half pay for the rest of his life as a means of settling the obligation of the government to him. There is available a letter which he addressed to the Congress indicating that he had lost his medicine chests and all his utensils during the war. Congress never discharged the obligation to him and the records indicate that Haym Solomon of Philadelphia extended personal assistance to him in lieu of the money owed to him by the government, as he did to many other needy governmental officials. To all physicians interested in the medical side of the Revolutionary War, this volume will be a most interesting contribution.

La atelectasia pulmonar. Por Julio Palacio, profesor adjunto de clínica médica de la Facultad de medicina, y Egidio S. Mazzei, jefe de trabajos prácticos de la Cátedra del Prof. M. R. Castex. Prefacio del Prof. W. Unverricht. Biblioteca argentina de medicina interna, Volumen II. Paper. Pp. 159, with 76 illustrations. Buenos Aires: Aniceto Lopez, 1937.

Pulmonary atelectasis is of great practical importance and has been the subject of many clinical and experimental studies during the last few years. Drs. Palacio and Mazzei have published several articles about the disease. The present book is a complete study of pulmonary atelectasis, especially from a clinical and radiologic point of view. The first chapter deals with the nature of the disease and the evaluation of its knowledge. The second, third and fourth chapters deal with the mechanical and nervous theories of the pathogenesis of pulmonary atelectasis, as well as with the pathologic anatomy, symptoms, diagnosis and clinical forms of the disease. In the remaining chapters the different forms of atelectasis are studied; that is, atelectasis in tuberculosis, collapsotherapy, suppuration and cancer of the lung, acute pneumonopathies, hemoptysis, bronchiectasis, spontaneous pneumothorax and postoperative atelectasis. The book is a contribution of value to medical literature. It has many illustrations, some of which are in color, and ends with thirty pages of bibliography.

Practical Chiropody. By E. G. V. Runting, F.I.S.Ch. Fifth edition. Cloth. Price, $3. Pp. 200, with illustrations. St. Louis: C. V. Mosby Company, 1937.

This small book discusses inflammatory lesions of the foot, verruca, and lesions of the nails, joints and skin. There are chapters on pads and plaster, therapeutic preparations and compounds, and instruments. It appears to be a satisfactory monograph on the subject of practical chiropody which can be recommended to the chiropodist and others who are interested in this subject. The illustrations are simple and instructive. The author is to be commended for keeping to the subject and not wandering over the human anatomy as has been done by others. He emphasizes the importance of good records.

J. B. Murphy, Stormy Petrel of Surgery. By Loyal Davis, M.D., M.S., Ph.D., Professor of Surgery and Chairman of the Division of Surgery in Northwestern University. Cloth. Price, $3. Pp. 311, with portrait. New York: G. P. Putnam's Sons, 1938.

More than twenty years has now elapsed since the death of Dr. J. B. Murphy, aptly subtitled in the book by Loyal Davis as the "stormy petrel of surgery." To the rapidly growing body of physicians graduated since 1916, Murphy's controversial but vital figure has emerged in countless tales from the lips of their elders. Dr. Davis, who occupies the chair of surgery at Northwestern University Medical School, held at one time by Murphy, has presented a fascinating account of the manifold activities of probably the best known American surgeon of his age. Constantly in hot water because of the publicity accorded to him (some of it apparently unsought), Murphy's unquestioned ability achieved a professional reputation both in this country and abroad equaled by few and surpassed by none. In general, the sources utilized by Davis were favorable to Murphy in most of his controversies. To this extent, therefore, the biography constitutes an apologia; but in

portions of the book, especially at the end, it is indicated that a substantial basis for at least some of the criticisms of Murphy may not have been wholly lacking. The admiration accorded Murphy as well as the opposition he received is admirably illustrated in the book. Certainly Murphy's successive professorship of surgery in Rush Medical College and in Northwestern University Medical School and his election to the presidency of the American Medical Association constitute ample evidence that, whatever Murphy's personal genius for creating virulent opposition, his ability was far out of the ordinary. The historical importance is reflected in the entire gamut of biography—the obscure origin and rapid rise of the "hero", development of antisepsis and asepsis, the Murphy button, the Haymarket riot, the shooting and care of Theodore Roosevelt, and many other general and medical historical events.

Milk Control. Governmental Regulation of the Dairy Industry in the United States. Prepared by the American Municipal Association. Publication No. 57. Paper. Price, 75 cents. Pp. 49. Chicago, Illinois: Public Administration Service, 1937.

The American Municipal Association in the present pamphlet provides a brief account of some of the activities of federal and local agencies with respect to the regulation of the dairy industry in the United States. In the appendixes there are provided the milk ordinance of the United States Public Health Service and brief abstracts of several other items of interest to those concerned with the public health aspects of milk.

Bureau of Legal Medicine and Legislation

MEDICOLEGAL ABSTRACTS

Coroners: Right of Minnesota Coroner to Exhume Body for Inquest.—The deceased died under circumstances indicating that her death was due to violence. A partial autopsy was performed and her body was then buried. The contents of her stomach, removed at the autopsy, were analyzed and the report filed about two weeks after the body had been buried showed the presence of strychnine. About a month after the death, the coroner determined to have a further autopsy made and to hold an inquest. He therefore ordered the exhumation of the body and its production at the inquest. The plaintiff, the surviving spouse, thereupon sought to enjoin the coroner and his assistant from holding the inquest and autopsy. The district court, Dakota County, however, after issuing a temporary restraining order, vacated that order. The plaintiff then appealed to the Supreme Court of Minnesota.

The precise question here presented, said the Supreme Court, is whether or not a coroner has the legal right to exhume a body for the purpose of holding an inquest. Mason's Minnesota Statutes, 1927, section 949, sets forth the oath the coroner must administer to the jurors "in view of the dead body":

> "When the jurors appear, the coroner shall call their names, and then, *in view of the dead body,* administer to them the following oath: "You do swear that you will diligently inquire, and due presentment make on behalf of the state of Minnesota, when, how, and by what means the person *whose body lies before you* did come to his death."

Section 951 lays down the oath required of witnesses:

> You do solemnly swear that the evidence you shall give to this inquest concerning the death of the person *lying before you dead* shall be the whole truth.

Section 953, relating to the form of the inquisition to be returned by the jury provides:

> The jury, *upon inspection of the dead body,* and after hearing the testimony and making the needful inquiries, shall draw up and deliver to the coroner the inquisition.

No claim is made, said the Supreme Court, that the coroner did not have authority to hold an inquest in this case. It was undisputed that the decedent was supposed to have come to her death by violence. In authorizing a coroner to hold an inquest on a person supposed to have come to his death by violence, the legislature must have recognized that facts leading to a suspicion or appearance of death by violence might not become evident until after the burial of the body. In requiring the presence of the body at the inquest, the statutes impliedly at least give the coroner authority to exhume the body on which the inquest is to be held. Those statutes do not require the coroner to secure a court order authorizing exhumation. As the time element for exhumation may be of the utmost importance in such proceedings, and delay resulting from litigation, because of the processes of decomposition, might thwart the very purpose for which the exhumation was sought, such authorization for summary action by the coroner seemed to the court to be best.

We do not mean, said the Supreme Court, to hold that coroners may exhume bodies indiscriminately, even for the purpose of holding an inquest. The passage of time or other factors might destroy the evidences of the cause of death so that an inquest would not accomplish its purpose; or sufficient cause for holding an inquest might not appear; or considerations of public health and welfare might make it inadvisable to permit the exhumation of a dead body. In such cases, or in any other case in which a proper showing is made, an injunction to prevent exhumation should and undoubtedly would be issued.

The judgment of the court below vacating its temporary restraining order was affirmed by the Supreme Court.—*Sejrup v. Shepard (Minn.), 275 N. W. 687.*

Malpractice: Bad Result Raises no Presumption of Negligence.—The plaintiff sued Dr. Parker and another physician for malpractice because of a burn allegedly resulting from x-ray treatments prescribed by Dr. Parker. He alleged that he consulted Dr. Parker relative to a tumor in the skin (keloid) behind his right ear and that Dr. Parker directed him to go to a Miss Sykes, whom the plaintiff alleged was an agent of Dr. Parker, in the Pittman Hospital, for x-ray treatments. He had had a growth at the site of the present growth many years before and had had it surgically removed, which left a scar, but it did not "open and close up" until after the x-ray treatment. The plaintiff presented no evidence to show negligence in the administration of the treatment. A physician called by the plaintiff stated that the plaintiff consulted him after the x-ray treatment and then had an "ulcer mastoid" back of his ear, which the witness considered chronic. At the conclusion of the plaintiff's testimony, the court entered a judgment for the defendants and he appealed to the Supreme Court of North Carolina.

The general rule is, said the Supreme Court, that in malpractice actions no presumption of negligence arises from an error of judgment in the diagnosis or the treatment prescribed by a physician, or in failure to effect a remedy or accomplish as good results as some one else might have done. A physician is neither a warrantor of cures nor an insurer. There was not sufficient evidence, therefore, to take the case to the jury. Taking the history of the patient's trouble and the testimony of the physician who was called on his behalf, the court could see no substantial injury, if any at all, caused by the x-ray operator, even granting that she was the agent of the defendant Parker. In the opinion of the court, there was no sufficient probative evidence that the plaintiff's condition was caused by the x-ray treatment complained of. Evidence, to be submitted to the jury, must be more than conjectural or speculative and must be such as will support a finding by the jury that there was negligence. The judgment in favor of the physician was accordingly affirmed.—*Davis v. Pittman (N. C.), 194 S. E. 97.*

Society Proceedings

COMING MEETINGS

National Medical Association, Hampton, Va., Aug. 15-19. Dr. John T. Givens, 1108 Church St., Norfolk, Va., General Secretary.

Oregon State Medical Society, Timberline Lodge, Aug. 24-27. Dr. Morris L. Bridgeman, 1020 S.W. Taylor St., Portland, Secretary.

West Virginia State Medical Association, White Sulphur Springs, July 11-13. Mr. Joe W. Savage, Public Library Building, Charleston, Executive Secretary.

Wyoming State Medical Society, Laramie, Aug. 7-9. Dr. M. C. Keith, 156 South Center St., Casper, Secretary.

Current Medical Literature

AMERICAN

The Association library lends periodicals to members of the Association and to individual subscribers in continental United States and Canada for a period of three days. Three journals may be borrowed at a time. Periodicals are available from 1928 to date. Requests for issues of earlier date cannot be filled. Requests should be accompanied by stamps to cover postage (6 cents if one and 18 cents if three periodicals are requested). Periodicals published by the American Medical Association are not available for lending but may be supplied on purchase order. Reprints as a rule are the property of authors and can be obtained for permanent possession only from them.

Titles marked with an asterisk (*) are abstracted below.

Alabama State Medical Assn. Journal, Montgomery

7: 397-440 (May) 1938

Some Thoughts on the Medical Profession. R. S. Hill, Montgomery.—p. 397.

Relation of Public Welfare and Industrial Development to Public Health and Medical Education in Alabama. S. Graves, University.—p. 402.

Treatment of Tetanus: Analysis of Thirty-Six Cases. E. G. Givhan Jr. and T. S. Boozer, Birmingham.—p. 407.

The Undulant Fever Problem: A New and Promising Idea as to Treatment of the Chronic Case. E. Thames, Mobile.—p. 411.

Some Things About the Eye of Interest to the General Physician. F. H. Clements, Birmingham.—p. 416.

American J. Obstetrics and Gynecology, St. Louis

35: 743-924 (May) 1938. Partial Index

Comparative Study of Posterior Pituitary Extract Administered at the Onset of and After Completion of Third Stage of Labor. F. F. Fortin, Chicago.—p. 761.

*Elderly Primiparas: Study of 240 Cases. C. R. Tew, Raleigh, N. C., and K. Kuder, New York.—p. 773.

Pneumococcic Infection of Genital Tract in Women, Especially During Pregnancy and the Puerperium. H. H. Nuckols and A. T. Hertig, Boston.—p. 782.

*Experimental Study of Acidosis and Alkalosis in Labor. W. T. Pride, J. R. Reinberger and D. T. Holland, Memphis, Tenn.—p. 793.

Weight Changes in Pregnancy. P. N. Bray, Duluth, Minn.—p. 802.

Wheat Germ Oil Therapy: III. Rat Experiments, Lactation, Clinical Uses, "Failures" and Effect on Congenital Anomalies. E. Shute, London, Ont., Canada.—p. 810.

Epilepsy and Pregnancy: Review of Literature and Study of Thirty-Seven Cases. A. Baptisti Jr., Baltimore.—p. 818.

Uterine Motility Resulting from Inflammatory Processes in Myometrium, in Absence of Ovarian Hormones. M. W. Laufer and S. R. M. Reynolds, Brooklyn.—p. 825.

Blood Loss in Menorrhagia. Adelaide P. Barer and W. M. Fowler, Iowa City.—p. 839.

Amplification of Fetal Heart Sounds. W. T. Pommerenke and F. W. Bishop, Rochester, N. Y.—p. 851.

Correlation Between Blood Pressure and Nembutal Dosage in Toxemias of Late Pregnancy. J. W. Ross, Washington, D. C.—p. 855.

Clinical Experiences with Ergonovine. J. I. Kushner and P. B. Wahrsinger, New York.—p. 859.

The Management of Pregnancy and Labor Complicated by Triplets. J. C. Hirst, Philadelphia.—p. 868.

Hyperplasia in Epithelium of Uterine Tubes. E. Allen, New Haven, Conn.—p. 873.

Tubal Pregnancy: Analysis of 445 Cases. P. Graffagnino, L. Seyler and M. M. Bannermann, New Orleans.—p. 875.

Pyelitis of Pregnancy Due to Bacillus Dysentery Flexner. H. L. Stewart, Detroit.—p. 887.

Elderly Primiparas.—From Sept. 1, 1932, to March 31, 1937, there occurred in the clinic service 11,919 deliveries with the birth of 12,059 infants. Tew and Kuder found that in this number there were 240 patients who were in the elderly (35 or more years of age) primipara group, an incidence of 2.01 per cent. Among these elderly primiparas there was an increased incidence of toxemia of pregnancy, placenta praevia and myoma uteri. Although there was no marked difference in the total incidence of all types of contracted pelves, funnel pelves were definitely more predominant than among the younger primiparas. Among the complications of labor in the elderly primiparas, an increased incidence of occipitoposterior positions, arrested transverse positions and postpartum hemorrhage was observed. The head of the child was unengaged at term in 53.3 per cent of elderly primiparas, as compared with only 20.9 per cent in a control series of patients. The incidence of operative delivery was greatly increased in the elderly primiparas, being double that of the clinic population. Maternal mortality was definitely higher in the elderly primiparas. Infantile mortality, which includes deaths of premature, full-term and neonatal infants, was markedly elevated in the case of elderly primiparas, being almost three times that of the clinic population. The elderly primipara does not seem to be able to undergo operative procedures at delivery with as good results to herself as does the younger woman, as shown by the complications of the puerperium. Cesarean section is not indicated in the elderly primipara unless there is an accompanying complication, which still further adds to the risk to the offspring.

Acidosis and Alkalosis in Labor.—In an attempt to explain the common occurrence of acidosis Pride and his associates determined the blood carbon dioxide of 157 patients during normal labor. Dehydration and starvation acidosis was eliminated by proper fluids and food. The urine of these patients did not show the presence of acetone and diacetic acid. There was a constant lowering of the blood carbon dioxide as labor progressed, which reached the lowest point at the end of the second stage with recovery to normal immediately following delivery. This is in accord with most observations. The degree of acidosis was always in direct ratio to the hours and character of labor. This increasing acidosis was assumed to be the accumulation of lactic acid resulting from increased muscular activities. Since the presence of diacetic acid and acetone in the urine due to dehydration and starvation and the acidosis evidenced by blood carbon dioxide was found to be in direct ratio to muscular activity the effect of various sedatives was studied. Sodium amytal in eight cases had little effect on the blood carbon dioxide. Three cases showed an average increase of 12.3 per cent of its volume after its administration, while five cases showed a decrease of 11.4 per cent. This indicates that sodium amytal in moderate doses does not produce sufficient analgesia to limit muscular activity. In a few selected cases scopolamine was given in conjunction with sodium amytal. There was a definite rise in the blood carbon dioxide. By increasing pulmonary ventilation scopolamine proved of some value, mainly because it always intensified the sedation, consequently reducing muscular activity. Sodium bicarbonate by mouth was given in a few cases with sodium amytal and scopolamine. The carbon dioxide was elevated from 4 to 24 per cent of its volume, indicating its value as an adjunct with analgesic medication. The correction of physiologic acidosis was attempted by the administration of sodium bicarbonate in 60 Gm. doses by mouth at hourly intervals. There was a definite return of the carbon dioxide to normal in ratio to the amount of sodium bicarbonate ingested. Experimental acidosis was produced in dogs by the administration of intravenous lactic acid and experimental alkalosis by the intravenous administration of sodium bicarbonate. Severe acidosis in the dog was corrected by a 2 per cent solution of sodium bicarbonate without ill effects. Experimental alkalosis in the dog was corrected by a 1 per cent solution of lactic acid. The experimental correction of alkalosis and acidosis in the dog bids to be a valuable adjunct in resuscitating exhausted patients in labor, which conditions have frequently heretofore been fatal.

American Review of Tuberculosis, New York

37: 465-578 (May) 1938

*Incidence of Extrapulmonary Primary Tuberculosis. H. C. Sweany and W. L. M. Martinsen, Chicago.—p. 465.

Studies on Retrogressive Changes of Tubercles. H. C. Sweany, Alma E. Tillotson and V. Kozielek, Chicago.—p. 484.

Tuberculous Dissemination During Therapeutic Pneumothorax: Study of Three Cases. W. A. Zavod, Valhalla, N. Y.—p. 494.

Tuberculous Bacillemia in Rabbits: I. Bacillemia in Nonallergic Animals. J. P. Duchaine, Philadelphia.—p. 507.

Id.: II. Bacillemia in Allergic Animals. J. P. Duchaine, Philadelphia.—p. 520.

Flotation Method of Sputum Examination. C. R. Smith, Los Angeles.—p. 525.

Clinical versus the Public Health Point of View in Treatment of Tuberculosis. F. M. Pottenger, Monrovia, Calif.—p. 533.

*Positive Intrapleural Pressure as an Aid to Pneumothorax Therapy. G. Edsall, Cambridge, Mass.—p. 542.

*Tuberculous Infection in Negro Colleges. P. B. Cornely and E. H. Allen, Washington, D. C.—p. 549.

Study of Results of Treatment of Pulmonary Tuberculosis in Mexican and White Patients. F. R. Harper, Tucson, Ariz.—p. 556.

Tuberculosis Survey in Jamaica. E. W. Flahiff, Kingston, Jamaica, British West Indies.—p. 560.

Extrapulmonary Primary Tuberculosis.—In addition to studying the primary pleural foci, which differ between workers, Sweany and Martinsen analyzed 132 cases of extrapulmonary primary tuberculosis to see whether an infection percentage of the important areas of the body could be estab-

lished for their community. There were 73.5 per cent primary infections involving only the lungs and hilar lymph nodes. There were 79 per cent when the cases with multiple ports of entry were added. There were 8.3 per cent isolated gastrointestinal infections and 12.9 per cent if the cases having multiple ports of entry were considered. There were 1.8 per cent isolated cervical or "head" primaries, which amounted to 4.5 per cent when the cases in which there were multiple ports of entry were added. There were three cases (2.3 per cent) of "pleural" primaries, three cases of "cryptic" lesions in the liver or lymph nodes with no demonstrable local lesion, three doubtful cases and seven (5.3 per cent) in which no calcifications were found. The percentage of cases showing primary hematogenous calcifications in the liver and spleen was 30.6.

Positive Intrapleural Pressure in Pneumothorax.—Since no detailed studies on positive pressure were to be found in the literature, Edsall made an analysis of the pneumothorax treatments administered at Trudeau Sanatorium during the years 1929 to 1933 inclusive. From a total of about 275 patients receiving pneumothorax, sixty-eight were found in whom, at some time during their stay, intrapleural pressures above zero on inspiration had been recorded. All cases were considered in which the pressure had remained positive throughout the respiratory cycle for more than occasional refills. Of the sixty-eight cases, forty-three remained in which positive pressures were induced to a significant degree and sustained over several refills, but in only thirty of the cases were there data adequate for comparing the effects of normal versus positive pressure. In these thirty cases the treatment was applied after a control period on normal pressure. Positive pressure was usually employed to improve a collapse rendered inadequate under normal pressures because of pleural adhesions. In fifteen cases positive pressure produced an increase in collapse of more than 15 per cent; the average increase in the thirty cases was 17 per cent. The increase obtained was not consistently related to the pressure employed. In thirteen cases, healing of cavities under both types of pressure could be compared. Ten cases showed accelerated healing while under positive pressure. In seventeen cases with previously unimproved Gaffky counts, induction of positive pressure was followed within two months by a negative sputum in two cases and a lowered Gaffky count in seven other cases. General results following positive pressure were definitely good in fourteen of the thirty cases and possibly beneficial in seven others. Complications possibly related to the use of positive pressure occurred in four cases. In the thirteen cases in which the effects of pressure were not comparable, two major complications occurred subsequent to the induction of positive pressure. The judicious and careful application of moderate positive pressure is a worth while procedure in selected cases in which simple pneumothorax has failed to produce satisfactory collapse and healing of the lung.

Tuberculosis in Negro Colleges.—In order to determine the extent of tuberculosis case-finding programs in Negro colleges in the South, Cornely and Allen sent questionnaires to 104 collegiate institutions requesting information on the extent and results of tuberculin testing of their students for the school years 1933-1934 through 1936-1937. Thirty-five institutions with an enrolment of 14,162 students, approximately 50 per cent of the total attendance in Negro colleges in the United States, responded. Only one institution has done tuberculin testing on entering students for three consecutive years; two have done it for two years, while three began this practice during the past school year. Based on information from the questionnaires, of 3,542 students in eleven institutions tested during three years, 33.9 per cent gave a positive reaction. The incidence of reactors varied from one institution to another and in the same school from one year to the other. In the summer of 1935 the National Tuberculosis Association made available purified protein derivative tuberculin free of charge to those Negro colleges and universities which were willing to carry out complete tests and to send their results to the association for compilation. Eight Negro colleges took advantage of this offer. Of the 2,040 students tested, the percentage of positive reactors of all ages was 39.1. Reactors gradually increase with age. The percentage of positive reactors was 44 for the male and 35.4 for the female. This is true for practically each year considered. This disparity between the sexes has already been noted in white students, but the inequality seems even greater in the Negro.

Anatomical Record, Philadelphia

70: 505-664 (April) 1938

First Contractions of the Heart in Rat Embryos. C. M. Goss, New York.—p. 505.
Left Superior Vena Cava Without Corresponding Vessel on Right Side: Case. W. J. Atwell and P. Zoltowski, Buffalo.—p. 525.
*Effect of Male Hormone on Descent of Testes. J. B. Hamilton, Albany, N. Y.—p. 533.
Golgi Apparatus of Cells of Adrenal Cortex After Hypophysectomy and on Administration of Adrenocorticotropic Hormone. J. D. Reese and H. D. Moon, Berkeley, Calif.—p. 543.
Review of Golgi Apparatus: Part II. H. Kirkman, Palo Alto, Calif., and Aura E. Severinghaus, New York.—p. 557.
Embryonic Development of Respiratory Portion of Pig's Lung. L. P. Clements, Omaha.—p. 575.
Conjoined Twins and Triplets in Trout. W. G. Lynn, Baltimore.—p. 597.
Cytologic Relationship Between Hypophysis and Germinal Epithelium of Testis. A. J. Gatz, Northfield, Minn.—p. 619.
Homology of Vesicular Ovarian Follicles of Mammalian Ovary with Coelom. H. W. Mossman, Madison, Wis.—p. 643.

Male Hormone and Descent of Testes.—Hamilton has seen cryptorchid testes of the immature macaque descend into the scrotum following adequate administration of testosterone acetate and testosterone propionate. There was less edema and scrotal swelling than in descent produced by gonadotropic substance. Processes considered largely responsible in the production of this descent are (1) growth and elongation of the elements of the cord and (2) slight development of the scrotum to form more of a pouch for the testes. Descent produced by anterior pituitary-like substances may be due in part to stimulation of the secretion of male hormone. Endocrine treatment may be of value in (1) producing descent in certain cryptorchid cases, (2) authorizing surgery at an early age instead of waiting until puberty to see whether spontaneous descent may occur and (3) aiding surgery preoperatively by the development of structures of the cord and postoperatively by preventing retraction and tension.

Annals of Surgery, Philadelphia

107: 641-880 (May) 1938. Partial Index

Aneurysms of Circle of Willis: Discussion of Dr. Dandy's Intracranial Occlusion of Internal Carotid for Aneurysms of Circle of Willis, with Supplementary Remarks. R. Matas, New Orleans.—p. 660.
Brain Abscess Due to Gas-Forming, Spore-Bearing Anaerobes: Report of Two Cases, with Recovery. C. Bagley Jr., Baltimore.—p. 681.
Use of Fascia and Ribbon Catgut in Repair of Cleft Palate and Harelip. A. G. Brenizer, Charlotte, N. C.—p. 692.
Tracheo-Esophageal Fistula: Description of New Operative Procedure and Case Report. H. A. Gamble, Greenville, Miss.—p. 701.
Scalenus Neurocirculatory Compression. R. G. Spurling and F. K. Bradford, Louisville, Ky.—p. 708.
*Carcinoma of the Breast in the Negro. I. Cohn, New Orleans.—p. 716.
*Simple Treatment for Empyema in Children. B. C. Willis, Rocky Mount, N. C.—p. 739.
Thoracoplasty in Treatment of Pulmonary Tuberculosis. L. W. Frank and P. Turner, Louisville, Ky.—p. 745.
*Lung Abscess: Analysis of Causes of Death in 100 Consecutive Fatal Cases. J. D. Rives, R. C. Major and S. A. Romano, New Orleans.—p. 753.
Carcinoma of Stomach, with Special Reference to Total Gastrectomy. A. W. Allen, Boston.—p. 770.
Diverticula of the Jejunum. J. C. A. Gerster, New York.—p. 783.
Complicating Effects of Diverticulitis of Colon on Abdominal Surgery and Especially on Surgery of the Large Bowel. V. C. David and R. K. Gilchrist, Chicago.—p. 801.
Surgical Treatment of Intractable, Chronic Ulcerative Colitis. H. W. Cave, New York.—p. 806.
Simple Method of Constructing a Vagina: Report of Four Cases. L. R. Wharton, Baltimore.—p. 842.
Posterior Vaginal Hernia. W. T. Black, Memphis, Tenn.—p. 855.
Vaginal Cysts, with Special Reference to Those of Gartner's Duct. R. L. Sanders, Memphis, Tenn.—p. 863.

Carcinoma of Breast in Negro.—Cohn states that during the period from 1932 to 1936 inclusive 481 persons with carcinoma of the breast were admitted to the Charity Hospital. Of these, 256 were Negroes and 225 were white. The per thousand cancer of the breast admissions (Negro) to the total admissions has remained constant, 1.7 per cent for the period under study. More nulliparous Negro than white women have presented themselves with cancer of the breast. The age of the Negro patient averages about 4.7 years younger than the

age of the white patient. The greatest number of cases are in the decade between 40 and 50 years of age in the Negro and between 50 and 60 in the white patient. Metastases in the axillary lymph nodes were present in 60 per cent on admission. Of 224 cases in which the records were adequate for study, only 118 were considered suitable for radical operation. No operation was indicated in twenty-seven cases. These facts further indicate the late period in which the Negro patients present themselves. The percentage of known dead following radical operation is 46. If those cases are added which could not be traced, the percentage dying within from one to five years would be well above 65. Of the 224 patients with carcinoma of the breast considered in this series, probably 75 per cent are dead in from one to four years after their admission to the Charity Hospital. Only 74 per cent of the Negro patients had x-ray investigation preoperatively. Therefore the percentage of skeletal metastases could not be estimated accurately. Irradiation either with roentgen rays or with radium was not the method of choice in any of the operable cases. These data are a challenge to the profession to continue its efforts to educate the public. End results can be improved by methods other than studies of etiology.

Empyema in Children.—Willis observed 104 consecutive cases of empyema in children less than 13 years of age from Oct. 15, 1915, to Oct. 15, 1937. He believes that the punch operation carries a lower mortality if the cavities are kept clean and the general health is improved. It is more difficult to treat these patients by this method than by rib resection and open drainage; but lower mortality, freedom from postural changes, unsightly scar and pus soaked dressings are the compensations. Since the disease rarely occurs as a primary lesion, a careful history must be obtained, especial attention being paid to the possibility of antecedent pneumonia. There was a history suggestive of a bronchopneumonia or lobar pneumonia in 103 cases. Fluoroscopic examinations before and after operation are most important, the former to detect the disease and its extent, the latter to watch the progress of the treatment. Whenever pus is found in the pleural cavity, without the presence of pneumonia, it should be drained through a small rubber tube by the closed method. A rib resection, certainly in the synpneumonic stage, is in the author's opinion dangerous surgery and often the cause of death. The thoracic punch operation is a simple procedure attended with practically no shock. The field is first painted with iodine; a point is selected, usually the eighth or tenth interspace, in the posterior axillary or scapular line, unless there is a localized pocket. The skin is infiltrated for three fourths of an inch, down to the pleura, the needle is changed for a larger one and introduced into the pleural cavity, pus is aspirated, the syringe is disconnected and a half inch incision is made through the skin and deep fascia beside the needle in the line of the intercostal space. The trocar is introduced directly into the pleural cavity so as not to injure the diaphragm. The obturator is pulled out and fairly rigid special tubing about 5 mm. in gross diameter with a lumen of 3 mm. is introduced. It should be twice the length of the cannula and fit snugly and it should reach well beyond the walling-off process of the cavity. The tubing should be rigid enough not to collapse when suction is made with the syringe. If the child is not too ill the pus can be evacuated while the cannula is in position. If there is a large accumulation, the pus should be removed at intervals in order not to reduce the intrathoracic tension too rapidly. Coughing is an indication to stop. The cannula is withdrawn somewhat. An air-tight dressing, consisting of 3 square inches of rubber tissue with a hole in the center, is applied over the tube down to the wall of the chest. The sides of the rubber tissue are then sealed to the wall of the chest with adhesive tape. The tube is doubled on itself and tied off so that the intrathoracic pressure may be reduced gradually by evacuating small amounts of pus at intervals. Irrigations with solution of sodium hypochlorite are employed after operation, when there are many plugs, but not until at least two days or more has elapsed, depending on the general condition of the child. The tube is shortened according to the capacity of the cavity and the fluoroscopic observations. It is removed only when the cavity holds less than 2 cc. and the chest is fluoroscopically negative for any further collections of pus. If the tube is removed before the cavity is obliterated, though thought to be sterile, there will be a high percentage of recurrence and chronic empyema may result. Postoperative treatment consisting of various chest exercises and general supportive measures should be prescribed and carried out. Rib resection in children should be abandoned except in rare cases and then only after aspiration or thoracotomy has been tried. Rib resections were performed in sixteen of the 104 cases and in eighty-eight the procedure was the trocar-punch operation. In only one child was complete collapse of the lung noted. The average stay in the hospital was 22.5 days. There were five deaths; two occurred in four children less than 1 year of age, two in seventeen children between 1 and 2 years of age and one in a group of thirty-one children from 3 to 5 years of age. There were no deaths in the forty-three children from 6 to 10 and the nine from 11 to 13 years of age.

Lung Abscess.—Rives and his colleagues determined the causes of death in 100 consecutive fatal cases of nontuberculous abscess of the lung, exclusive of any due to tumors, foreign bodies or bronchiectasis. The duration of the disease before treatment, the extent and severity of the infection and the methods of treatment employed were not the primary contributing causes of death. Three more or less controllable factors contribute, in an important degree, to the mortality. They are spreading pneumonitis, empyema and anemia. Anemia may be readily controlled by transfusion and by adequate supportive treatment. Empyema may be avoided in most instances if surgical treatment is instituted early in superficial lesions and if needling of the chest is abandoned. Spreading pneumonitis, the chief cause of death, may be minimized if the following are avoided: attempts to drain the abscessed cavity during the acute stage; compression therapy, especially when the cavity is incompletely drained; all measures such as intermittent postural drainage likely to cause severe paroxysms of coughing while the cavity is full, and surgical drainage in the acute stage and at any time in deep seated abscesses. Approximately half of the deaths were probably not preventable, but in many of the remaining fatal cases the fatality might have been avoided by adequate supportive treatment combined with the judicious use of commonplace methods of bronchial or external surgical drainage. Spreading pneumonitis was the cause of death in four fifths of the fatal cases. The best results will be attained by an orderly plan of treatment which utilizes supportive measures, bronchial drainage and surgical drainage according to their proper indications, and which is continued until the abscess has disappeared completely.

Archives of Dermatology and Syphilology Chicago

37: 737-936 (May) 1938

Early Epidermal Neoplasia: Description and Interpretation: Theory of Mutation in Origin of Cancer. R. L. Sutton Jr., Kansas City, Mo.—p. 737.
Henry Granger Piffard: Great Factor in Progress of American Dermatology. P. E. Bechet, New York.—p. 781.
Aplastic Anemia Following Use of Neoarsphenamine. M. Kadin, Calumet, Mich.—p. 787.
*Treatment of Chronic Dermatitis by Cataphoretic Method. F. P. Lowenfish, New York.—p. 797.
Syphilitic Asthma with Atrophic Cirrhosis in Acquired Syphilis: Report of Case. E. W. Klinefelter, York, Pa.—p. 805.
Scleredema Adultorum (Buschke): Its Relation to Trophedema and Its Pathogenesis. M. Helfand, New York.—p. 809.
Syndrome of Spoon Nails, Anemia, Cheilitis and Dysphagia. N. P. Anderson, Los Angeles.—p. 816.
Cutaneous Manifestations of Trichophyton Purpureum (Bang). G. M. Lewis, R. M. Montgomery and Mary E. Hopper, New York.—p. 823.

Treatment of Dermatitis by Cataphoresis.—Lowenfish treated twenty cases of chronic occupational dermatitis, ten cases of dermatophytosis and nine cases of moniliasis by cataphoresis with tap water. In the first twenty cases the rapidity of response was striking. In most cases itching was relieved and the appearance much improved after one or two treatments. Clearing up the last traces of the eruption required a longer time, but in all twenty cases the skin became practically normal. Two patients experienced relapse while under observation, but the condition again cleared after two or three treatments. In the ten cases of dermatophytosis and the nine of moniliasis in which the diagnosis was established by microscopic and cultural examination, from two to ninety-one treatments by cataphoresis were given, but the method was of no

value. Ten of the cases of chronic dermatitis of the hands and feet were followed after treatment was stopped and the eruptions disappeared and they have not recurred in six after a follow-up period of from one month to two years. No explanation can be offered as to why this treatment was beneficial.

Archives of Internal Medicine, Chicago

61: 693-846 (May) 1938

Arachnodactyly and Its Medical Complications. P. H. Futcher and H. Southworth, Baltimore.—p. 693.
The Heart in Acromegaly. C. Courville and V. R. Mason, Los Angeles.—p. 704.
*Cholesterol Content of Blood in Heart Disease. C. A. Poindexter and M. Bruger, New York.—p. 714.
Clinical Studies of Respiration: VI. Expiratory Inflation During Air Hunger and Dyspnea Produced by Physical Exertion in Normal Subjects and in Patients with Heart Disease. J. A. Greene and L. W. Swanson, Iowa City.—p. 720.
Direct Measurement of Height of Thyroid Epithelium: Method of Assay of Thyrotropic Substance; Clinical Application. R. W. Rawson and P. Starr, Chicago.—p. 726.
*External Secretory Function of Human Pancreas: Physiologic Observations. J. M. McCaughan, B. L. Sinner and C. J. Sullivan, St. Louis.—p. 739.
Lipopenia Associated with Cholesterol Estersturz in Parenchymatous Hepatic Disease. E. M. Boyd and W. F. Connell, Kingston, Ont., Canada.—p. 755.
Studies on Porphyria: III. Acute Idiopathic Porphyria. W. J. Turner, North Little Rock, Ark.—p. 762.
Gastric Secretion in Man: Observations on Effects of Repeated Injections of Histamine and on Transient Achlorhydria. L. Schiff, with technical assistance of Catherine Dorrmann and Toba Tahl, Cincinnati.—p. 774.
Calcific Aortic Stenosis: Clinical and Electrocardiographic Study. L. H. Berk and M. Dinnerstein, New York.—p. 781.
Osseous Form of Gaucher's Disease: Report of Case. S. Melamed, New York, and W. Chester, Mamaroneck, N. Y.—p. 798.
Diseases of the Heart: Review of Significant Contributions Made During 1937. A. Graybiel, with editorial assistance of P. D. White, Boston.—p. 808.

Blood Cholesterol in Heart Disease.—Poindexter and Bruger determined the cholesterol content of the blood in sixty-one patients with cardiac disease; eighteen had rheumatic heart disease, twenty-four had arteriosclerotic heart disease and nineteen had hypertensive heart disease. Thirty-three normal subjects were used for a comparative study. It was observed that whereas 28 per cent of the patients with rheumatic heart disease had blood cholesterol values below 150 mg. per hundred cubic centimeters, not one of the patients with either arteriosclerotic or hypertensive heart disease exhibited a similar hypocholesteremia. Only 5 per cent of the patients with rheumatic heart disease showed a concentration of cholesterol in the blood over 250 mg. per hundred cubic centimeters, approximately 45 per cent of the patients with either arteriosclerotic or hypertensive heart disease demonstrated this hypercholesteremia. Little or no difference could be observed as to the distribution of the blood cholesterol values when the patients with arteriosclerotic and those with hypertensive heart disease were compared. The cholesterol content of the plasma tended to be low in rheumatic heart disease and elevated in arteriosclerotic or hypertensive heart disease. The results for the group with rheumatic heart disease were not significant since the difference between the means for the group of normal subjects and those for the group with rheumatic heart disease divided by the standard error of the difference of these means gave a value of only 1.03. However, when the same calculations were employed for the patients with arteriosclerotic and those with hypertensive heart disease the results were 4.9 and 4.29, respectively. No appreciable difference was observed in the ratios of ester to free cholesterol in the three types of heart disease considered.

External Secretion of Pancreas.—McCaughan and his associates made physiologic observations on the external secretory function of the human pancreas on a patient in whom a pancreatic fistula developed after a second Billroth type of gastric resection. The fistula was later successfully transplanted to the anterior wall of the stomach. Preceding the operation the effect on the rate of secretion and on the total base was determined before and after the administration of various drugs and foodstuffs. The volume of pancreatic juice secreted in twenty-four hours was estimated at 600 cc. A rise in secretory rate followed the administration of secretin, a mixed meal, water, hydrochloric acid, beef broth, dextrose, olive oil, peptone, coffee, mecholyl and physostigmine. A fall in the secretory rate occurred after sodium bicarbonate, bile salts, magnesium sulfate, atropine, epinephrine and histamine. The total base was elevated after the administration of secretin, sodium bicarbonate and coffee and was depressed after the administration of a mixed meal, beef broth, dextrose, bile salts, physostigmine, epinephrine and histamine. There was no significant change in total base after the exhibition of hydrochloric acid, peptone and magnesium sulfate.

Archives of Ophthalmology, Chicago

19: 663-866 (May) 1938

Anomalous Projection and Other Visual Phenomena Associated with Strabismus. F. H. Verhoeff, Boston.—p. 663.
Cancer of the Eyelids: I. Basal Cell and Mixed Basal Cell and Squamous Cell Epithelioma. H. L. Birge, Rochester, Minn.—p. 700.
Superficial Punctate Keratitis: Its Treatment with Iodine Solutions. A. Cowan and T. H. Cowan, Philadelphia.—p. 709.
Avertin Anesthesia for Ophthalmic Operations. J. Laval, New York.—p. 714.
*Net Average Yearly Changes in Refraction of Atropinized Eyes from Birth to Beyond Middle Life. E. V. L. Brown, Chicago.—p. 719.
Molded Contact Lenses. T. E. Obrig, New York.—p. 735.
Strength of Epinephrine Compounds in Ophthalmotherapy: New Epinephrine Ointment. J. D. Weintraub, Cincinnati.—p. 759.
Fever Therapy for Ocular Diseases. J. S. McGavic, Cincinnati.—p. 769.

Changes in Refraction of Atropinized Eyes.—In an attempt to determine the net average yearly changes in static refraction in atropinized eyes from birth to the end of the fifty-first year, Brown made 8,820 observations and computed the changes in the refraction of one or both eyes of 1,203 persons (611 clinic patients and 592 patients from private practice). From birth to the end of the seventh year hyperopia increased (refraction decreased, average 0.18 diopter) in the average case. From 8 to 14 years the refraction moved toward the myopic side at a rapid rate (increased), and this increase (average 0.23 diopter) continued, though at less than half the rate, up to the age of 20. Thereafter the amount of change was negligible. Up to the age of 33 there was a slight yearly increase of refraction (except for the thirtieth year); from 34 to 42 years the change was uniformly a net average decrease of 0.03 diopter, though this was slight; from 43 to 51 years the net average increase of refraction was again 0.03 diopter (increase of myopia, decrease of hyperopia) in each successive year.

Canadian Medical Association Journal, Montreal

38: 421-528 (May) 1938

*Abnormal Functioning of Gastric Secretory Mechanism as Possible Factor in Pathogenesis of Peptic Ulcer. B. P. Babkin, Montreal.—p. 421.
Painless, Bloodless and Safe Hemorrhoidectomy. F. B. Bowman, Hamilton, Ont.—p. 430.
*Kraurosis, Leukoplakia and Pruritus Vulvae: Treatment by Resection of Sensory Nerves of Perineum. B. Usher and A. D. Campbell, Montreal.—p. 432.
Xanthomatosis Ossium. G. S. French, Owen Sound, Ont.—p. 435.
Carcinoma of Ampulla of Vater: Report of Two Cases. L. G. McCabe, Windsor, Ont.—p. 438.
Appendical Colic. D. E. Robertson, Toronto.—p. 443.
Id. A. Brown, Toronto.—p. 445.
Venereal Disease in Relation to Pregnancy. J. C. Goodwin, Toronto.—p. 447.
Treatment of Amebic Dysentery: Report of Ten Cases. Pauline Beregoff-Gillow, Montreal.—p. 456.
Use of Insulin in Urticaria: Preliminary Report. W. R. Caven, Toronto.—p. 459.
Deaths in Tetanus: Phenomenon of Toxin Release. W. E. B. Hall, St. Joseph, Mo.—p. 460.
*Effect on Donors of Repeated Limited Blood Loss. F. Cadham, Winnipeg, Man.—p. 465.
Radiotherapy of Cancer of the Breast. P. Brodeur, Ottawa, Ont.—p. 467.
Carcinoma of the Esophagus. F. R. Scott, Toronto.—p. 470.
Pellagra: Case. Mary L. M. Palmer, Verdun, Que.—p. 473.

Gastric Secretion and Peptic Ulcer.—During his study of the physiology of the gastrointestinal tract, Babkin arrived at a new conception of the regulation of the secretory activity of the gastric glands. It became evident that under certain circumstances, owing to some defect in the secretory mechanism, gastric secretion may deviate from its normal course and conditions may arise which initiate destructive processes in the gastric mucosa. Histamine is present in the gastric juice, whether the secretion is stimulated by subcutaneous adminis-

tration of histamine, by electrical stimulation of the vagi or by sham feeding in dogs with esophagotomy and a gastric fistula. The concentration of the histamine equivalent of the gastric juice increases or diminishes with the increase or diminution of the rate of secretion of the gastric juice. The source of the histamine equivalent of the gastric juice is presumably the gastric mucosa itself. On the basis of these and other considerations the theory is advanced that the secretory fibers of the vagi during activity liberate histamine or histamine-like substances which stimulate the parietal cells. Since histamine has a strong effect on the blood vessels and is able to produce stasis in the capillaries, which may lead to the formation of erosions in the gastric mucosa, it is emphasized that in considering the causes of peptic ulcer the possible role of histamine must not be overlooked. This is not a new theory of the pathogenesis of peptic ulcer but an attempt to evaluate some of the consequences of abnormal functioning of the gastric secretory mechanism.

Kraurosis, Leukoplakia and Pruritus Vulvae. — Since August 1934, Usher and Campbell have performed resection of the sensory nerves of the perineum on eight patients in whom pruritus proved refractory to nonsurgical measures. The technic described by Learmowth, Montgomery and Counseller was adopted. While it is true that regressional changes do occasionally follow resection of the perineal sensory nerve, one must not lose sight of the fact that carcinoma in this region commonly follows leukoplakia, with pruritus the only symptom and excoriation from trauma the only visible lesion. On the other hand, if biopsies taken at the time of the nerve resection do not reveal malignant changes this procedure will relieve symptoms and does not preclude vulvectomy for carcinoma of the vulva if and when it is detected. Complete relief has been obtained in five of the eight patients for periods varying from five months to two and one-half years. In another case there was complete relief for two and one-half years, when vaginitis and leukorrheal discharge resulted in a slight recurrence which rapidly subsided under appropriate treatment. The patch of leukoplakia had also disappeared. In one patient the nerves could not be excised completely. Relief from symptoms was obtained in the remaining case, but the period of postoperative observation is as yet too short to permit the outcome to be determined. The patients have not been followed sufficiently long to determine whether the relief will be permanent. In the majority of cases in which operation was performed, local applications, roentgen therapy and endocrine therapy had been employed previously without success.

Effect on Donors of Repeated Blood Loss.—In the 1936 epidemic of poliomyelitis in Manitoba, convalescent serum for the treatment of the disease was prepared in the government bacteriologic laboratory. Cadham states that it was found expedient to have each of the 125 donors return at intervals and on each occasion to withdraw from 65 to 140 cc. of blood. Fifty of the 125 donors supplied blood six or more times (the maximum was twelve donations) at an average interval of one week. An investigation of the physical condition of the donors six months later disclosed no ill effects. Forty-seven of the fifty donors stated that they were improved in health; even those who were in apparently good health remarked on an increased feeling of well-being. Sixty-five of the donors experienced an improvement in appetite and seven commented on a clearer and healthier tone of the skin. Three donors had been subject to scattered acne pustules; within six weeks of the first withdrawal of blood this eruption disappeared. Seventy-two of the donors increased in weight, the increase varying from 3 to 15 pounds (1.3 to 7 Kg.). There was no decrease in the complement power of the blood, and the titer remained at the same normal level. No variation in blood volume was noted. No donor had anemia. Each of these donors one or more years previously had suffered from an attack of poliomyelitis. Four were far from robust; however, they had been selected because their blood carried a high titer of neutralizing substances. There was a definite improvement in the general health of the latter four donors; they stated that they were able to move about with less difficulty, which would indicate an improved muscle tone coincident with the improved health and increase in weight. Of 200 donors from whom from 50 to 75 cc. of blood was withdrawn on alternate days over a period of from six to ten days for the purpose of obtaining normal human serum to be used in the treatment of patients with septicemia, none suffered any ill effects; the majority were benefited by the procedure. Why the removal of limited quantities of blood benefit the donor is not clear; obviously, it is not so much a question of disease as of physiology. The increased well-being and the increase in weight are apparently physiologic; the disappearance of acne pustules indicates a stimulation of certain immunity factors. Evidently, under certain circumstances the withdrawal of limited amounts of blood at regular intervals may prove of decided therapeutic value.

Journal of Biological Chemistry, Baltimore

123: 613-818 (May) 1938. Partial Index

Concentration of Lecithin, Cephalin, Ether-Insoluble Phosphatide and Cerebrosides in Plasma and Red Blood Cells of Normal Adults. E. Kirk, Copenhagen, Denmark.—p. 637.

Volumetric Benzidine Method for Determination of Inorganic and Ethereal Sulfate in Serum. Marschelle H. Power and E. G. Wakefield, Rochester, Minn.—p. 665.

New Method for Determination of Iodine in Five Cubic Centimeters of Blood or Other Biologic Material. J. F. McClendon and A. C. Bratton, with technical assistance of R. V. White and W. C. Foster, Minneapolis.—p. 699.

Study of Proteins of Inactive and Active Mammary Gland. S. M. Jackson and R. A. Gortner, St. Paul.—p. 719.

Effect of Alloxan on Oxidation of Alcohol by Various Tissues. F. Bernheim, Durham, N. C.—p. 741.

Purification of Prothrombin. W. H. Seegers, H. P. Smith, E. D. Warner and K. M. Brinkhous, Iowa City.—p. 751.

Journal of Clinical Investigation, New York

17: 207-368 (May) 1938

*Effect of Eclamptic Blood on Urinary Output and Blood Pressure of Human Recipients. E. W. Page, Los Angeles.—p. 207.

Studies in Physiology of Artificial Fever: I. Changes in Blood Volume and Water Balance. J. G. Gibson 2d and I. Kopp, Boston.—p. 219.

Effect of Insulin on Concentration of Uric Acid in Blood. E. F. Rosenberg, Rochester, Minn.—p. 233.

Studies of Circulation in Patients Suffering from Spontaneous Myxedema. H. J. Stewart, J. E. Deitrick and N. F. Crane, New York.—p. 237.

*Heat Stroke: Clinical and Chemical Observations on Forty-Four Cases. E. B. Ferris Jr.; M. A. Blankenhorn, H. W. Robinson and G. E. Cullen, Cincinnati.—p. 249.

Measurement of Tubular Excretory Mass, Effective Blood Flow and Filtration Rate in Normal Human Kidney. H. W. Smith, W. Goldring and H. Chasis, New York.—p. 263.

*Effect of Alcohol on Water and Electrolyte Balance in Man. W. M. Nicholson and H. M. Taylor, Durham, N. C.—p. 279.

Estimations of Work of the Heart During and Between Attacks of Angina Pectoris. I. Starr, C. J. Gamble, J. S. Donal and L. H. Collins, Philadelphia.—p. 287.

Critical Remarks on Determination of Urinary Excretion of Ascorbic Acid. M. van Eekelen and M. Heinemann, Utrecht, Netherlands.—p. 293.

Guanidine Bases in Blood of Dogs with Experimental Hypertension Produced by Constriction of Renal Arteries. C. G. Child, New York.—p. 301.

Effect of Vitamin D on Calcium and Phosphorus Metabolism: Studies on Four Patients. F. Albright and H. W. Sulkowitch, Boston.—p. 305.

Comparison of Effects of A. T. 10 (Dihydrotachysterol) and Vitamin D on Calcium and Phosphorus Metabolism in Hypoparathyroidism. F. Albright, Esther Bloomberg, T. Drake and H. W. Sulkowitch, Boston.—p. 317.

Evaporation of Body Water in Lobar Pneumonia. G. K. Anderson, Rochester, N. Y.—p. 331.

Observations on Etiologic Relationship of Achylia Gastrica to Pernicious Anemia: VII. Resemblances Between Proteolytic Activity of Normal Human Gastric Juice on Casein in Neutral Solution and Activity of Intrinsic Factor. F. H. L. Taylor, W. B. Castle, R. W. Heinle and Margaret A. Adams, Boston.—p. 335.

*Excretion of Urea in Normal Man and in Subjects with Glomerulonephritis. H. Chasis and H. W. Smith, New York.—p. 347.

Effect of Total Sympathectomy on Occurrence of Shock from Hemorrhage. N. E. Freeman, S. A. Shaffer, A. E. Schecter and H. E. Holling, with technical assistance of N. E. Marean, Philadelphia.—p. 359.

Effect of Eclamptic Blood on Urinary Output and Blood Pressure.—Page undertook to determine whether the transfer of 400 cc. of blood from patients with severe preeclampsia or eclampsia to normal pregnant women would have any effect on the blood pressure, urinary output and symptomatology of the recipient and, by standardization of the procedure, to discover in eclamptic blood traces of posterior pituitary in excess of the amount that might be present in normal blood. Thirty-seven determinations of antidiuretic effects together with blood pressure curves were performed on twenty-eight patients. As little as 0.01 unit of solution of

posterior pituitary may be readily detected on suitably prepared human test subjects. Transfusions of 500 cc. of blood from normal donors does not result in a significantly altered blood pressure or urinary output in the recipient, although the results suggest the presence of traces of posterior pituitary in normal blood. If small amounts of solution of posterior pituitary are added to human blood in vitro and allowed to stand for from thirty to sixty minutes before transfusion, a definite antidiuretic response may be obtained in the recipient. If large amounts of solution of posterior pituitary are given to donors prior to the withdrawal of blood, no definite antidiuretic response can be obtained in the recipient, indicating a rapid elimination or destruction of the hormone from the circulating blood stream. When amounts of 400 cc. of blood are rapidly transferred from patients with eclampsia or severe preeclampsia to normal pregnant women, the recipients do not show any rise in blood pressure, interference with diuresis or untoward symptoms. The results do not support the contention that there is a toxic substance in toxemic blood or the theory that there is a hypersecretion of the posterior pituitary in eclampsia.

Heat Stroke.—Ferris and his colleagues studied forty-four patients with heat stroke admitted to the hospital during two severe heat waves in 1936. Cardiac failure or peripheral circulatory collapse was not evident in the majority of patients. The sodium chloride content of the blood was not significantly altered. The condition was associated with a moderate acidosis and hemoconcentration. The high body temperature appeared to be the chief cause of the symptoms of heat stroke. Old age, degenerative disease and acute alcoholism are important contributing factors in heat stroke. The onset was precipitated by a diminution or cessation of sweat in the majority of patients. Although the primary cause for the sudden cessation of sweat has not been determined, it appears that loss of chlorides, dehydration and circulatory failure are not responsible. Measures to lower the body temperature promptly are indicated; ice water tubbing with massage was the most effective method in severe cases.

Alcohol and Water and Electrolyte Balance.—Nicholson and Taylor ascertained the effect of alcohol in moderate quantities on the water and salt balance in healthy, young adult male volunteers. They were allowed to carry on their usual routine as students. A constant diet was given. Two duplicate samples of the diet were analyzed for the potassium, sodium, chloride, water and nitrogen content. The day was divided into three periods of eight hours. The urine was collected for each period, toluene added as a preservative and the specimens were kept in the ice box until used. The stools were collected for twenty-four hour periods. The blood samples were collected anaerobically, heparin being used as the anticoagulant. The subject was given alcohol in the form of whisky, gin or ethyl alcohol over a period of eight hours, when a second blood sample was obtained. The third and fourth blood samples were obtained eight and thirty-two hours respectively after consumption of alcohol. Five complete balance studies were made, the results of which were consistent regardless of the form in which alcohol was taken. Data reveal that there was a retention of sodium, chloride and potassium. A small amount of water was lost during twenty-four hours but this loss was more striking during the eight hour period in which the alcohol was given. Diuresis was produced and occurred always in the first four hours of the period, so that during the last four hours only small amounts of urine were voided, even though alcohol was taken during this time. Although there was a diuresis of water, the sodium, chloride and potassium ions were retained and their concentration in the urine was lowered. Accompanying the water diuresis, which occurred only while the subject was taking alcohol, there was a loss of weight greater than could be accounted for by the loss of water in the urine alone. The retention of the sodium and the chloride was greater when the intake of these ions was high, and in the two experiments in which the sodium chloride intake was inadequate there was a negative balance for these ions. In all experiments the potassium retention was great and apparently had no relationship to the amount of sodium or chloride retained. Potassium in excessive amounts is a depressant and produces malaise, nausea, vomiting and headache, all of which symptoms are observed after excessive ingestion of alcohol. The increase in the concentration of plasma potassium after the ingestion of alcohol may be responsible for some of the after-effects of overindulgence in alcohol. The unpleasant symptoms of postalcoholic excess appeared at a time when the concentration of alcohol in the blood had fallen and when the potassium concentration was at its maximum.

Excretion of Urea in Glomerulonephritis.—Chasis and Smith determined the urea clearances in ten normal subjects and twenty-two subjects with glomerulonephritis, with special reference to the degree of concentration of the glomerular filtrate as indicated by the simultaneous inulin U/P ratio (the degree to which the glomerular filtrate has been concentrated by the reabsorption of water). Urea is invariably reabsorbed to some extent from the glomerular filtrate, whether this is at the normal level or is reduced by disease. This reabsorption is interpreted in terms of a hypothesis, based on independent evidence, in which it is assumed that water reabsorption occurs in two stages, one in the proximal tubule and one in the thin limb and distal tubule. At any inulin U/P ratio the reabsorption of urea proceeds in the nephritic kidney essentially as it would in the normal kidney. As the capacity to reabsorb water is impaired by disease, the fraction of urea reabsorbed decreases, so that the urea clearance approaches the rate of glomerular filtration. In none of the subjects examined was there evidence of increased back-diffusion of urea, the elevation of the blood urea in nephritis being a result solely of the reciprocal relationship between this term and the urea clearance, as expected in principle.

Journal of Lab. and Clinical Medicine, St. Louis

23: 775-886 (May) 1938

Intravenous Autohemotherapy with Hemolyzed Blood: Technic and Leukopoietic Response: Preliminary Report. S. R. Dean and H. C. Solomon, Boston.—p. 775.
Changes in Erythrocyte Fragility Due to Physical Exercise and Variation of Body Temperature. J. E. Davis, University, Ala.—p. 786.
Excretion of Sulfanilamide in Perspiration. W. J. Highman Jr., Chicago. —p. 790.
Degenerative Leukocytic Transformations Associated with Aging: Differential Identification of Monocytes. L. A. Erf, New York.—p. 791.
*Leukocytic Variability and Its Relation to Meteorologic Alterations. M. Berg, Chicago.—p. 797.
*Formation of Abnormal Blood Pigment as Complication of Sulfanilamide Therapy. I. Posner, N. W. Guthrie and Marjorie R. Mattice, New York.—p. 804.
Hyperindicanemia in Renal Insufficiency and Significance of Diazo Reaction. S. R. Townsend, Boston.—p. 809.
Transient Electrocardiographic Changes Noted During Attacks of Angina Pectoris: Report of Case. H. H. Shapiro and L. A. Smyth, Madison, Wis.—p. 819.
Partition of Nitrogen in Canine Gastric Juice. S. A. Komarov, Montreal, Canada.—p. 822.
Still's Disease with Hyperglobulinemia. A. E. Taussig, St. Louis.—p. 833.
Influence of Calcium Salts on Digitalis Action. R. A. McGuigan and J. A. Higgins, Chicago.—p. 839.
Microdetermination of Calcium in Water. E. L. Breazeale and R. A. Greene, Tucson, Ariz.—p. 845.
*Standardization of Folin-Malmros Micro Blood Sugar Method for Capillary and Venous Blood and Its Adaption to Photoelectric Photometer. L. F. Jourdonais, Evanston, Ill.—p. 847.
Method for Staining Rickettsia in Sections. S. Ochi, Sapporo, Japan.—p. 852.
Body Temperature Regulating Apparatus and Improved Axograph for Animal Experiments. M. L. Tainter, San Francisco.—p. 856.
Simplified Method of Correcting Sedimentation Rate for Effect of Cell Volume. A. Hambleton and R. A. Christianson, London, Ont., Canada. —p. 860.
Direct Reading Nul Point Amplifier for Measuring Hydrogen Ion Concentrations and Oxidation-Reduction Potentials. F. L. Wynd and P. L. Varney, St. Louis.—p. 864.
Method for Utilizing Illuminating Gas in the Brown, Fildes and McIntosh or Other Anaerobe Jars of the Laidlaw Principle. J. H. Brewer and J. H. Brown, Baltimore.—p. 870.
Weight Curve Complicated by Deaths. R. D. Templeton and Mary C. Patras, Chicago.—p. 874.

Leukocytic Variability and Meteorologic Alterations.—The influence of the meteorologic alterations on the daily leukocyte count of four normal individuals was studied by Berg. The average level of the count and the degree of fluctuation varied with each individual. Variations in levels with constitutional differences were also observed. The neutrophilic

levels are slightly lower in winter in subject 1 and almost the same level in subject 3; however, both basophilic and eosinophilic levels are noticeably elevated in both in the winter. In general, the more pronounced the polar infalls the more pronounced are the peaks in the leukocyte picture. The meteorologic alterations have been shown for the most part to be associated with pressor episodes. Following these, there then occurs a vascular dilatation with a fall in diastolic pressure which is associated with an increase in the eosinophils, the appearance of more young forms, and an increase in the neutrophils and in the total leukocyte count. The fluctuations may in part be explained by the emptying of the reservoirs of cells, such as the spleen, liver and lungs. The daily records of five patients (one each of aleukemic lymphadenosis, myelogenous leukemia, lymphatic leukemia, chronic far-advanced pulmonary tuberculosis and far-advanced pulmonary tuberculosis) are presented. The degree and character of the fluctuations were influenced to varying degrees by the pathologic condition of the patient.

Abnormal Blood Pigment After Sulfanilamide.—Posner and his associates encountered four cases showing a specific effect of sulfanilamide therapy. In these patients, spectroscopic examination of the blood showed that the abnormal appearance of the specimens was associated with an absorption band in the red part of the spectrum. When the blood was diluted just enough to allow for the passage of light, this band divided the red-orange field into two parts occurring roughly in the ratio of 55:45, the line being slightly nearer the yellow end. On spectrometric measurement the density center of the absorption band, which was not sharply defined, was located at 634 millimicrons (the position given for methemoglobin by Bodansky). That the pigment encountered was not sulfhemoglobin was demonstrated in several ways. The methemoglobin was highly unstable, thus interfering with detection and quantitative determination. Cyanosis associated with methemoglobinemia is temporary and responds promptly when the causative agent is withdrawn. Except in mild cases, cyanosis occasioned by sulfhemoglobin persists for weeks, since the pigment is extraordinarily stable. Although the cyanosis associated with sulfanilamide therapy may cause no clinical concern so long as it is due to methemoglobin, the possibility of the development of sulfhemoglobinemia should not be ignored. Sulfhemoglobin (never methemoglobin) may be detected by spectroscopic examination of a transilluminated ear lobe. Since it is the absolute level of nonoxygenated hemoglobin which determines the presence or absence of cyanosis, sulfanilamide administration must be undertaken cautiously when the total hemoglobin concentration is low. If the erythrocyte count is normal and remains so (twice weekly checking is advisable), the appearance of definite cyanosis is a signal for temporary cessation of the therapy. With anemic patients, however, this warning is lacking. Spectroscopic examination may not suffice to indicate danger.

Folin-Malmros Micro Blood Sugar Method.—In determining blood sugars by the Folin-Malmros micromethod, Jourdonais obtained capillary and oxalated venous blood in the usual way. The technic of the method used is essentially that recommended by Folin and Malmros, with the exception of the length of time for heating. The tubes were placed in the water bath for twenty minutes. A 0.001 per cent dextrose solution was used as a standard. The directions for use of the colorimeter given by Goudsmit and Summerson were followed. A yellow glass filter proved to be of advantage. A high intensity of light increased the sensitivity of the colorimeter. It further resulted in a saving of time by making it possible to approach the null point of the galvanometer more rapidly. A yellow filter is advantageous for securing consistent results. The readings with the colorimeter do not follow Beer's law, and a calibration curve is necessary for accurate results.

Maine Medical Journal, Portland

29: 79-106 (May) 1938

Cancer of the Rectum. E. H. Risley, Waterville.—p. 79.
Organization of State Fracture Committee. A. Thorndike Jr., Boston.—p. 85.
Clinicopathologic Case Report: Intraperitoneal Rupture of Bladder and Complete Rupture of Urethra, with Bladder Floated Upward in Abdomen. H. L. Curtis, Portland.—p. 86.

Michigan State Medical Society Journal, Lansing

37: 385-480 (May) 1938

Diagnosis and Treatment of Diseases of Adrenal Glands. G. A. Harrop, New Brunswick, N. J.—p. 407.
Certain Reading Disabilities as Related to Speech. F. P. Currier, Grand Rapids.—p. 414.
Neurosyphilis: Importance of Early Diagnosis and Necessity of Specialized Therapy. G. W. Hyde, Detroit.—p. 419.
Education in Maternity Essential to Public Health. H. Emerson, New York.—p. 420.
Sulfanilamide in Urologic Infections. R. S. Breakey and J. F. Harrold, Lansing.—p. 425.

Minnesota Medicine, St. Paul

21: 297-384 (May) 1938

Estimation of Permanent Disability. G. R. Dunn, Minneapolis.—p. 297.
Enlargement of the Heart: Its Recognition by the Radiologic Method. P. Hallock, Minneapolis.—p. 303.
*Congenital Syphilis: Analysis of the Problem in Minnesota. F. W. Lynch, St. Paul.—p. 313.
Personal Surgical Observations. J. L. McLeod, Grand Rapids.—p. 317.
Etiology of Chorea. C. H. Schroder, Duluth.—p. 322.
Medical Books for the Laity. T. E. Keys, Rochester.—p. 325.

Congenital Syphilis.—Though only thirty-seven new cases of congenital syphilis have been observed in two years in the University and Ancker hospitals, it is evident that many of these could have been prevented. Lynch attempts to determine the reason for failure of preventive measures and in many of these cases it has been possible to place the responsibility for the failure. Future attempts toward the control of congenital syphilis require greater interest on the part of the medical profession and the provision of more adequate social service and health department facilities. The following procedures are suggested as methods for the prevention of congenital syphilis and its serious effects on the child: 1. Every woman with gonorrhea should have a Wassermann test in order to recognize early many cases of syphilis which are now passing unrecognized. 2. Every syphilitic woman should receive adequate treatment but should also be warned of the need to report to her physician early in any subsequent pregnancy and inform him of her syphilitic status. 3. Every pregnant woman should have a Wassermann test done early in pregnancy. 4. After the diagnosis of syphilis is made during pregnancy, treatment should be intensive. 5. At the time of delivery a Wassermann test should be performed on the maternal blood or the "cord" blood in every case.

New England Journal of Medicine, Boston

218: 749-790 (May 5) 1938

*Sulfanilamide in Treatment of Acute Gonococcic Urethritis: Clinical and Immunologic Observations. W. W. Spink and E. A. Gaston, Boston.—p. 749.
Cerebral Asphyxia During Nitrous Oxide and Oxygen Anesthesia. J. D. Stewart, Boston.—p. 754.
Immediate Flap Grafts Following Trauma. H. F. Day, Boston.—p. 758.
Progress in Study of Cardiovascular Disease in 1936. S. McGinn, Boston.—p. 759.

218: 791-826 (May 12) 1938

Effect of Irritants and Drugs Affecting Autonomic Nervous System on Mucosa of Normal Rectum and Rectosigmoid, with Especial Reference to "Mucous Colitis." B. V. White Jr. and C. M. Jones, Boston.—p. 791.
Treatment of Hay Fever by Injections of Pollen Extract Emulsified in Lanolin and Olive Oil: Preliminary Report. H. L. Naterman, Boston.—p. 797.
Adrenogenital Syndrome and Adrenocortical Tumors. G. F. Cahill, New York.—p. 803.

Sulfanilamide in Gonococcic Urethritis.—Spink and Gaston present the results of treatment and immunologic observations in twenty-one men with acute gonococcic urethritis treated with sulfanilamide. The patients were ambulatory. Eight of them had received previous treatment without diminution of their symptoms. With a few exceptions the only treatment prescribed was sulfanilamide and the forcing of fluids. Most of the patients continued at their daily occupations while under treatment. All were first given 4 Gm. of sulfanilamide daily in four divided doses. Sometimes the dose was reduced to 2 Gm. a day so as to determine the effect on the course of the disease and on the bacteriolytic titer of the blood. The drug was administered for from ten days to three weeks. It was continued as long as evidence of the infection was still present. Eleven patients were declared cured, seven had no urethral discharge but could not be proved as free from infec-

tion and three failed to respond to treatment. The administration of sulfanilamide results in an increase of the bactericidal power of the blood against the gonococcus. A high bacteriolytic titer is desirable in patients with gonococcic infection, since the action of bacteriolysins has been shown to be a major mechanism in rendering the blood stream free from organisms. While a high bacteriolytic titer is an expression of humoral immunity, it cannot be correlated closely with local immunity. Spink and Keefer have shown that, while the blood stream may be rendered free from gonococci by the introduction of immune horse serum, organisms may still be present in prostatic secretions. This was illustrated in the present study by the three patients classified as failures. The bactericidal power of the blood was elevated while sulfanilamide was being administered, but the urethral exudates persistently contained gonococci. It may be argued from these cases that, although the bactericidal tests done against two strains of gonococci showed the drug to be effective, the actual strain harbored by the patient would not be affected by sulfanilamide. Since the bactericidal mechanism is important in clearing the blood stream of organisms, sulfanilamide should be a useful adjunct in the treatment of local gonococcic infections.

Northwest Medicine, Seattle

37: 127-160 (May) 1938

Management of Abdominal Adhesions. B. P. Mullen, Seattle.—p. 127.
Ureterointestinal Implantation: Bilateral with Cystectomy and Hysterectomy in One Operation. J. H. Besson, Portland, Ore.—p. 131.
Congenital Absence of Portion of Small Intestine. J. McGregor and M. Rothenberg, Bellingham, Wash.—p. 134.
Simple Air Valve Apparatus for Office Use. E. W. Simmons, Portland, Ore.—p. 136.
*Large Twins. A. Mathieu, Portland, Ore.—p. 137.
Gastroscopic Examinations: Review of Eighty Cases. R. H. Loe, Seattle.—p. 139.
Malignant Priapism. A. H. Peacock, Seattle.—p. 143.
Lung Abscess Secondary to Axillary Infection. H. B. Kellogg, Seattle.—p. 145.
Prevention of Foot Drop in Prolonged Bed Rest. D. R. Loree, Ellensburg, Wash.—p. 147.

Large Twins.—A more or less thorough survey of the literature revealed only three reports regarding large twins with a combined weight of 7,000 Gm. or more. Through personal communications Mathieu collected seventeen additional reports of large twins. The highest combined weight of the twins in the series, excluding enormous twins reported by Warren (combined weight of 16,102 Gm.) is 9,180 Gm., the lowest 7,000 Gm. The smallest individual child weighed 3,400 Gm., the largest 4,670 Gm. The sex of the twins in this collection was mentioned in only six instances. In five, both babies were males. In the sixth (the author's), one was a male and the other a female. The male infant was 170 Gm. heavier, the combined weight was 7,880 Gm.

Psychiatric Quarterly, Utica, N. Y.

12: 213-404 (April) 1938

Review of Research Efforts of the New York State Psychiatric Institute and Hospital During the Year 1937. N. D. C. Lewis, New York.—p. 217.
Aspects of Electroencephalogram in Epilepsy and Feeblemindedness. W. E. Rahm Jr. and A. C. Williams Jr., New York.—p. 230.
Is the Paroled Patient a Menace to the Community? H. M. Pollock, Albany, N. Y.—p. 236.
Use of Methylene Blue in Treatment of Catatonic Dementia Praecox Patients. W. J. Allexsaht, Helmuth, N. Y.—p. 245.
Concerning Hallucinations of Smell. G. M. Davidson, Ward's Island, N. Y.—p. 253.
Psychologic Elements in Continuous Bath Therapy. C. N. Allen, Hanover, N. H.—p. 271.
Sudden "Exhaustive" Death in Excited Patients. N. R. Shulack, Wingdale, N. Y.—p. 282.
Pathologic Changes in the Brain in Cases of Experimental Phosphorous Intoxication. A. Ferraro, G. A. Jervis and W. H. English, New York.—p. 294.
Study of the Problem of Suicide. B. Pollack, Rochester, N. Y.—p. 306.
Folie à Deux: Review of Literature Since 1900 and Case Report. J. A. Brussel, Brentwood, N. Y.—p. 331.
Hyperostosis Frontalis Interna: Review of Literature. O. C. Perkins, Brooklyn, and A. M. Biglan, Central Islip, N. Y.—p. 341.
Psychotherapy in Neurotic Patients with Somatic Disease. E. Davidoff, Syracuse, N. Y.—p. 351.
Schizophrenia in Children. J. Louise Despert, New York.—p. 366.
Epileptic Seizure in Hypoglycemic Treatment of Schizophrenia. D. Ruslander, Buffalo.—p. 372.
The Startle Pattern in Epileptic Patients. W. A. Hunt, H. Strauss and C. Landis, New York.—p. 375.

Surgery, St. Louis

3: 645-804 (May) 1938

*Bacteriology of Spreading Peritonitis Complicating Acute Perforative Appendicitis: Clinical and Experimental Study. J. O. Bower, J. C. Burns and H. A. Mengle, Philadelphia.—p. 645.
Calcified Fecalith in Appendix: Report of Case of Acute Suppurative Appendicitis Perforated by Calcified Fecalith. H. J. Shelley, New York.—p. 658.
Surgical Treatment of Complicated Duodenal Ulcer. W. L. Wolfson and R. E. Rothenberg, Brooklyn.—p. 663.
*Primary Carcinoma of Biliary System: Clinicopathologic Analysis for Forty Cases. R. D'Aunoy, M. A. Ogden and B. Halpert, New Orleans.—p. 670.
Experimental Study of Behavior of Free Fat Transplants. C. E. Gurney, Rochester, Minn.—p. 679.
Method of Constant Suction Applied to Levine Tube. C. E. Welch, Boston.—p. 693.
Partial Gastrectomy in Treatment of Peptic Ulcer. F. G. Connell, Oshkosh, Wis.—p. 696.
Hemangioma and Its Treatment. W. T. Peyton and N. L. Leven, Minneapolis.—p. 702.
Operative Treatment of Hypospadias: Report of Thirteen Cases. C. D. Creevy, Minneapolis.—p. 719.
Treatment of Dislocation of the Shoulder. H. Milch, New York.—p. 732.
Congenital and Developmental Coxa Vara. G. A. Duncan, Norfolk, Va.—p. 741.
Cancer of the Breast in the Male: Report of Four Cases and Illustrations of Simplified Radical Mastectomy. J. Sarnoff, Brooklyn.—p. 766.
Model to Illustrate Mechanics of Respiration and Movements of Mediastinum With and Without Various Kinds and Degrees of Bronchial Stenosis. L. Eloesser and A. Freeman, San Francisco.—p. 774.

Bacteriology of Spreading Peritonitis.—Bower and his co-workers studied the bacteriology of spreading peritonitis in living man and in dogs during life and at necropsy in an effort to establish the identity of the causative organisms. Specimens for cultures were removed from fifty-five patients suffering from gangrenous appendicitis associated with spreading peritonitis. Cultures were taken from the peritoneal cavity of 154 dogs. The number and kinds of aerobes in spreading peritonitis in man are greater than those found in the dog. The greatest increase is in Bacillus coli, 396 per cent. Four of the five members of the streptococcus group were found in the dog. This group was 81.7 per cent greater in the human being than in the dog. On the other hand, Staphylococcus albus was found in the dog and not in man. There is a close resemblance of the anaerobic flora in the two groups. In man Clostridium welchii was found in 63 per cent. The only appreciable difference in percentage between the two groups, as concerns Clostridium welchii, was in the association of this organism with other anaerobes and aerobes; in man this was 40 per cent as compared with 29 per cent in the dog. A gram-positive anaerobe, not identified but not Clostridium welchii, was found in 17 per cent in man and 6 per cent in the living dog. Anaerobic streptococci and Vibrion septique were the only two important anaerobes identified in the cultures taken from the dog that were not found in man. Obligate anaerobes and Bacillus sporogenes were found in human cultures but not in the dog. The Bacillus histolyticus was not found in either group. Gram-positive diplococci and cocci were not found in man.

Primary Carcinoma of Biliary System.—D'Aunoy and his associates base their study on the clinical records, the necropsy observations and the gross and microscopic appearances of preserved specimens in forty cases of primary carcinoma of the biliary system encountered among 6,050 necropsies. The study is particularly concerned with the site of the primary growth, its structure, its spread locally and to distant parts, its clinical manifestations and their duration and the immediate cause of death in the patient. Of the forty tumors, twenty-three were primary in the liver, six in the extrahepatic biliary ducts and eleven in the gallbladder. Twenty of the patients were Negroes (eighteen male, two female) and twenty were white (twelve male and eight female). Of the twenty-three primary neoplasms of the liver, sixteen were liver cell and seven were cylindric cell carcinomas. All those primary in the extrahepatic biliary ducts and gallbladder were cylindric cell carcinomas. In the six cases of carcinoma of the extrahepatic biliary ducts, the primary growths were small, not more than 1 cm. in diameter. In four of these the common bile ducts and in two the common hepatic ducts were the site of the growth. In all six cases, however,

the neoplasms obstructed the duct lumens, causing dilatation of their proximal portions with resultant jaundice. All but one of these patients had calculi in the gallbladder. In the eleven cases of primary carcinoma of the gallbladder, the walls of the organ were thickened by neoplastic infiltration. A fungating mass protruded into the cavity of the organ in four of the cases, and biliary calculi (mixed gallstones) were present in seven. The microscopic structure of the liver cell carcinomas varied. Variations in the structural arrangement of the cells, the amount and quality of the stroma and the extent of secondary changes, such as hemorrhage and necrosis, were responsible for the differences in microscopic and gross appearances of the growths. In many instances, in addition to local infiltration or spread by lymph and blood channels, the growths metastasized to regional lymph nodes and distant organs. The majority of the patients with liver cell carcinomas were jaundiced and showed cirrhosis of the liver with ascites. All six patients with primary cylindric cell carcinomas of the extrahepatic biliary ducts were jaundiced, six had cholelithiasis (mixed gallstones) and one had cirrhosis of the liver with ascites. Four of the eleven patients with primary cylindric cell carcinomas of the gallbladder had cholelithiasis, jaundice and cirrhosis of the liver with ascites; one had cholelithiasis, jaundice and cirrhosis; one had cholelithiasis and ascites; one had cholelithiasis and cirrhosis; one had jaundice and cirrhosis, and one had cirrhosis only. The temperature of all the patients, irrespective of the type or location of the tumor, showed only slight variations from the normal. The illnesses lasted for from two to sixteen months, with an average duration of four and one-half months. In all but two of the patients in whom the neoplasms were incidental observations the new growth was the principal lesion, and in twenty-five patients it was the immediate cause of death.

Surgery, Gynecology and Obstetrics, Chicago

66: 819-946 (May) 1938

Influence of Serum Protein on Motility of the Small Intestine. R. P. Barden, W. D. Thompson, I. S. Ravdin and I. L. Frank, Philadelphia.—p. 819.
Noninvasive Potential "Carcinoma" of Cervix. C. S. Stevenson, Baltimore, and E. Scipiades Jr., Budapest, Hungary.—p. 822.
Acute Putrid Abscess of Lung: II. Analysis of Forty-Five Consecutive Operative Cases. H. Neuhof and A. S. W. Touroff, New York.—p. 836.
Study of Hyperemesis Gravidarum, with Special Reference to Blood Chemistry. O. Glassman, New York.—p. 858.
The Obstetric Shoulder Trauma. O. Scaglietti, Bologna, Italy.—p. 868.
*Bacterial Species Found in Nonsterile Surgical Catgut Sutures. R. O. Clock, Scarsdale, N. Y.—p. 878.
Endocholedochal Sphincterotomy. R. Colp and H. Doubilet, New York.—p. 882.
Hallux Valgus. H. C. Stein, New York.—p. 889.
Value of Delayed Single Pedicle Skin Flaps in Plastic Repair of Scalp. W. B. Davis, Philadelphia.—p. 899.
Carcinoma of Bronchus: Clinical and Pathologic Study of 164 Cases. J. J. Stein and Hope L. Joslin, Hines, Ill.—p. 902.
Skeletal Distraction of Tibia. D. M. Bosworth, New York.—p. 912.
Operability in Cancer of Rectum. T. E. Jones, Cleveland.—p. 925.
Transvesical Diathermy in Treatment of Carcinoma of Bladder. A. Randall and C. A. W. Uhle, Philadelphia.—p. 927.

Bacteria in Sutures.—Clock examined thirty-six brands of surgical catgut sutures and found fifteen brands to be nonsterile. Of the 589 lots tested 161 lots contained nonsterile sutures. From the nonsterile catgut sutures, thirty-six spore-forming bacterial species were isolated and identified; including five sporulating anaerobes together with thirty-one aerobic and facultative spore-forming bacilli. All the aerobic and facultative spore-forming bacilli, together with two species (Clostridium bifermentans and Clostridium sporogenes) of the sporulating anaerobes, are commonly considered nonpathogenic; but the three other species of sporulating anaerobes (Clostridium fallax, Clostridium histolyticum and Clostridium welchii) are pathogenic. Some sutures of some brands of catgut contained aerobic and facultative spore-forming bacilli which are nonpathogenic, while in other sutures of the same lot were found pathogenic, sporulating anaerobes. On chemical analyses of sutures of those brands of catgut which proved to be nonsterile, appreciable quantities of soluble chemical compounds were found. The physical characteristics of these sutures indicated that they had been subjected either to a low degree of heat or to no heat.

Western J. Surg., Obst. & Gynecology, Portland, Ore.

46: 233-292 (May) 1938

Diabetic Surgery: II. End Results. I. Wills and P. A. Gray, Santa Barbara, Calif.—p. 233.
A Discussion of Appendicitis: Supplemental to a Report Given in 1932. F. R. Fairchild, Woodland, Calif.—p. 240.
Chronic Cholecystitis with Reference to the Irritable Colon. E. C. Moore, Los Angeles.—p. 244.
Intestinal Obstruction in Children: Report of 100 Cases Treated at the Children's Hospital in Los Angeles. W. J. Norris, Los Angeles.—p. 249.
Myoma of the Stomach. C. G. Toland and W. P. Kroger, Los Angeles.—p. 259.
Malignant Disease of the Small Intestine: Delayed Anastomosis Following Resection in Chronic Obstruction. P. K. Gilman, San Francisco.—p. 269.
*Experiences with Scopolamine in Obstetric Practice: Reasons for Its Discontinuance by the Author. W. W. Bell, Seattle.—p. 276.

Scopolamine in Obstetric Practice.—In the use of scopolamine as an obstetric analgesic Bell found that there were some inexplicable deaths. In an endeavor to determine whether or not these deaths were directly attributable to the use of scopolamine, he made an analysis of 441 consecutive cases personally treated over a period of three years. Scopolamine had been used in 225 cases and pentobarbital sodium was substituted for scopolamine in 216 cases. Scopolamine was usually effective in producing a desirable degree of amnesia and analgesia, but its cumulative effect on the respiratory center of the infant so often resulted in fetal asphyxia that the author has not felt justified in continuing its use. Although the dangers to the life of the mother as a result of the use of scopolamine may usually be eliminated, he so fully recognizes the right of the infant to live that he is convinced that neither the mother nor practitioners can justify its use merely in an endeavor to minimize the suffering of the mother in childbirth. His experiences with 216 patients to whom pentobarbital sodium was given instead of scopolamine, without the untoward results sometimes incident to scopolamine, have convinced him that the barbiturates are not only as effective as scopolamine but are far safer for both mother and child.

Yale Journal of Biology and Medicine, New Haven

10: 419-530 (May) 1938

Johannes Müller and the Modern Conception of Cancer. H. W. Haggard and G. M. Smith, New Haven, Conn.—p. 419.
Roentgen Methods for Routine Obstetric Pelvimetry. H. Thoms and H. M. Wilson, New Haven, Conn.—p. 437.
Blood p_H in Vivo: I. Changes Due to Respiration. L. F. Nims and C. Marshall, New Haven, Conn.—p. 445.
Serologic Patterns of Human Serums: Reciprocal Heteroagglutination Reactions of Human and Sheep Bloods. G. H. Smith, New Haven, Conn.—p. 449.
Clinical Study of Prefrontal Lobe Function. R. Messimy and W. J. German, New Haven, Conn.—p. 455.
Epidemiologic Studies in Whooping Cough. C. E. Culotta, New Haven, Conn.; D. Dominick, Philadelphia, and Elizabeth Ross Harrison, New Haven, Conn.—p. 473.
Vertebrate Photoreceptors. S. R. Detwiler, New York.—p. 485.
The Naegele Pelvis: Summary and Description of Case. H. Thoms, New Haven, Conn.—p. 513.
*Staphylococci of the Human Vagina. L. Weinstein, New Haven, Conn.—p. 519.

Staphylococci of the Human Vagina.—Weinstein examined 419 vaginal secretions for the presence of viable staphylococci. Of 196 pregnant patients and 223 with or without disease of the female genitalia, 191 were found to be harboring staphylococci. Eighty-two of the pregnant and 109 of the nonpregnant women yielded staphylococci. Most of the strains isolated were of the albus type, aureus being found in a much smaller number of cases; 90 per cent as contrasted with 9.9 per cent. No correlation could be established between the incidence of the albus type and any particular clinical syndrome. Staphylococcus aureus was recovered, however, with the greatest frequency from pregnant individuals. Of the nineteen strains isolated, nine were found in cases of pregnancy, three were recovered from cases of Trichomonas vaginalis vaginitis, one from an individual with a retroverted uterus, four from cases of "nonspecific" vaginitis, one from an individual with dysmenorrhea and one from a patient in whom there was no pathologic change of the genitalia. The albus type of staphylococcus deserves further study in its possible relation to disease of the female genitalia, since many of the types isolated possess the property of hemolyzing blood, occasionally coagulate serum and ferment mannitol which, according to Chapman, are indicative of potential pathogenicity.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

Bristol Medico-Chirurgical Journal

55: 1-100 (Spring) 1938

Medical Defense. C. A. Moore.—p. 1.
Some Clinical Applications of the Male and Female Sex Hormones. G. L. Foss.—p. 23.
Thoracic Surgery. A. L. d'Abreu.—p. 43.
Lobectomy for Bronchiectasis: Case. A. W. Adams—p. 63.

British Journal of Experimental Pathology, London

19: 95-170 (April) 1938

Meningococcus Broth Culture Filtrates: Failure of Protection Experiments. B. G. Maegraith.—p. 95.
Tumors in Rats and Mice Following Injection of Thorotrast. F. R. Selbie.—p. 100.
Observations on Living Vaccinia and Ectromelia Viruses by High Power Microscopy. F. Himmelweit.—p. 108.
Chemical Composition of Active Agent of Rous Sarcoma No. 1. A. Pollard.—p. 124.
Formamide Method for Extraction of Polysaccharides from Hemolytic Streptococci. A. T. Fuller.—p. 130.
*Effect of Sulfonamide Compounds on Certain Bacteria in Vitro. C. J. C. Britton.—p. 140.
*Preparation of Protective Serums Against Hemolytic Streptococci. H. Loewenthal.—p. 143.
Specific Complement Fixation with Shope's Fibroma Virus and Its Relationship to Virus-Neutralizing Properties of Immune Serums. C. E. van Rooyen.—p. 156.
Serologic Properties of Polysaccharide Isolated from Mucoid Substance of Hemolytic Streptococci. H. Loewenthal.—p. 164.

Effect of Sulfonamide Compounds on Bacteria in Vitro.—Britton observed the effects of five sulfonamide compounds on fifty strains of twenty different organisms (bacillus, staphylococcus, streptococcus, brucella, clostridium and micrococcus) by a simple in vitro method. Of these twenty, only in the cases of Streptococcus viridans and pneumococcus types 1 and 2 and group 4 were any bactericidal or bacteriostatic effects observed.

Protective Serums Against Hemolytic Streptococci.—Loewenthal finds that the antigen responsible for the production of the antibody effective against the invasiveness of hemolytic streptococci is intimately associated with the capsule which these cocci develop in the early hours of growth in culture. This antigen is extremely labile, being readily destroyed by heat and low concentrations of formaldehyde or merthiolate. Exposure of a suspension of young encapsulated cocci to a temperature of 55 C. for twelve minutes kills the organisms but leaves the capsular antigen intact. More prolonged heating at this temperature rapidly destroys this antigen. With suspensions of cautiously heat-killed young cultures it has been possible for the first time to prepare potent protective serums against hemolytic streptococci in the mucoid phase. This method of immunization also gives rise to protective antibody against nonmucoid strains more rapidly and regularly than the old methods. The result of a single experiment suggests that the production of a potent polyvalent serum by simultaneous immunization with a number of strains is possible.

British Medical Journal, London

1: 829-880 (April 16) 1938

Origin of Cancer. W. Cramer.—p. 829.
Alleged Effect of Acetylcholine on Immobilized Joints. A. M. Harvey.—p. 835.
*Glasgow Experience of Increased Dysentery Prevalence. E. Bloch.—p. 836.
*Carcinoma of the Palate: How Often Does It Mask Malignant Disease in Maxillary Antrum? J. R. Nuttall.—p. 839.
Tinea of the Foot. P. K. Fraser.—p. 842.

Increased Prevalence of Dysentery in Glasgow.—During the past three years the annual number of cases of dysentery registered in Glasgow has been increasing and has become relatively high. During the second half of 1937 the city with 203 cases shared in the reported countrywide increase in prevalence. Bloch reviews some aspects of the prevalence of dysentery during these years and of raised incidence on previous occasions. Dysentery became notifiable in 1919, when 117 cases were registered. The annual average over the whole period 1919 to 1937 was 81.4 cases. Reports from various sources regarding the seasonal incidence of dysentery differ widely. The years under special review here might be regarded as revealing some resemblance between the seasonal incidence of dysentery and that of the other diarrheal diseases. Deaths from diarrhea and enteritis are highest in either the third or the fourth quarter of the year. Despite the increased attention paid recently to dysentery, many mild and many bacteriologically negative cases remain unnotified. Suspicion of dysentery may not be raised when cases do not occur in groups. Institutional infections form a substantial and increasing proportion of the total number of cases. The excess of total cases for 1937 over 1936 is accounted for by institutional cases. Some relation does probably exist between the institutional and the home cases. The gross figures for all cases of dysentery without subdivision according to type of bacillus revealed no special feature with regard to sex incidence. The figures with respect to the age of incidence of both institutional and noninstitutional cases confirmed the recognized high incidence of dysentery in children between 1 and 15 years of age. Deaths certified as due to dysentery remain few. Sixteen persons died of dysentery in 1936 and nine in 1937. A majority of the cases of bacillary dysentery are probably still due to the Flexner type of organism. During the years 1929 to 1936 positive specimens from Glasgow, according to the city bacteriologist, have numbered 413 Flexner and 278 Sonne. It is not uncommon to find different types and strains of endemic dysentery organisms associated in a multiple focus. The first large Glasgow outbreak of Sonne dysentery occurred in a big general municipal institution toward the end of November 1937 and continued till the end of January 1938. In December forty-two cases were registered from this focus and only two from other Glasgow institutions. Home infections numbering twenty-eight were also registered in Glasgow in December. The seventy-two December cases thus constituted more than a fourth of the year's 272 cases. The epidemic assumed the form of two successive waves of infection. There was no definite evidence of spread of infection by food, milk or water, but it was thought important that the milk supplies should be scalded in the wards and attention devoted to the methods of cleansing food utensils, especially milk containers, passing through the central kitchen and dairy premises. No incidence of Sonne dysentery was detected in these departments, all the members of the staff of which were examined bacteriologically.

Carcinoma of the Palate.—Nuttall presents an analysis of 167 cases of malignant palatal ulceration and of 104 cases of antral carcinoma passing through a single clinic. As a result of the investigation it is suggested that the tendency to recurrence after treatment of carcinoma of the palate is due to the fact that a large proportion of "palate growths" are really neoplasms of the antrum. With certain limitations it is a wise generalization that every case of carcinoma of the palate must be considered and treated as an antral growth unless it has been proved not to be so.

1: 881-934 (April 23) 1938

Some Problems in Psoriasis. J. T. Ingram.—p. 881.
*The State of the Heart in Gallbladder Disease: Personal Investigation. S. M. Laird.—p. 884.
Meningitis Treated with Prontosil: Four Cases. F. H. Jacob.—p. 887.
Unusual Complications of Labor. H. Burt-White.—p. 888.
*Unusual Physical Signs in Lobar Pneumonia. G. S. Erwin and R. J. McGill.—p. 891.
Position of the Patient in Gastroscopy: Operation Table Attachment. H. Taylor.—p. 892.

The Heart in Gallbladder Disease.—Laird determined the condition of the heart in sixty-five consecutive cases of disease of the gallbladder and the biliary tract. There were fifty-eight women and seven men. Fifty of the patients had a clinical cardiac lesion. Of the sixty-five patients, twenty-four were regarded as obese. This suggests that the obesity, if a factor, is not the whole explanation of the presence of cardiac lesions in these cases of disease of the gallbladder. Fifty patients were followed up or were under observation until death occurred. Operation was performed in forty and thirteen of these had cardiac manifestations. Cholecystectomy produced a cure of the symptoms of gallbladder disease in 78 per cent of cases in which this operation was performed and appeared to be a satisfactory measure for obtaining amelioration of the cardiac manifestations occurring in cases of disease of the

gallbladder. The presence of similar cardiac conditions in cases of disease of the gallbladder does not constitute a contraindication to cholecystectomy. Fatal pulmonary embolism occurred as a postoperative complication in 5 per cent of the cases. There was some evidence to suggest that the longer disease of the gallbladder is permitted to exist the greater is the possibility of cardiac manifestations making their appearance. The incidence of lesions of the heart in cases of disease of the gallbladder was not influenced by the presence of jaundice. Coronary artery thrombosis occurred in 12 per cent of the cases and on occasion may present difficulty in differential diagnosis. The electrocardiographic evidence was inconsistent in many cases of myocardial insufficiency when compared with the clinical condition of the patient but was of great value in cases in which coronary artery thrombosis had occurred.

Physical Signs in Lobar Pneumonia.—Lobar pneumonia may present, in place of the classic physical signs, abnormal signs confusing the diagnosis even when the onset, symptoms and temperature all seem conclusive. These perplexing features require explanation and this Erwin and McGill believe can be found only in the physiologic and pathologic changes in the underlying lung, since physical signs in themselves, even when taken in groups, are not conclusive proof of any particular disease. Thus the consolidation of pneumonia due to alveolar exudate is usually evidenced by dulness to percussion and by bronchial breathing, and these are the accepted signs of the disease. When alveolar exudation is complicated by bronchial filling there is produced a different group of physical signs—those of a solid lobe with a blocked bronchus. A complete absence of breath sounds is discovered, together with other signs suggestive of a moderate accumulation of fluid.

Indian Medical Gazette, Calcutta

73: 193-256 (April) 1938

Present Position of Opium Smoking Habit in India: Part III. Studies on Physical and Mental Effects Produced by Opium Smoking (Analytic Review of 300 Opium Smokers Examined in the Field). R. N. Chopra and G. S. Chopra.—p. 193.
*Incidence of Rheumatic Infection in India (as Judged by Admission and Postmortem Rates and by Clinical Experience of Teaching Physicians at Medical Colleges and Schools of India): Part I. V. S. Mangalik and H. Stott.—p. 203.
Subcutaneous Nodule of Rheumatism. P. G. Gollerkeri.—p. 207.
Bacteriophage Treatment of Dysentery in Private Practice. M. O'Connor.—p. 210.
Herpes Zoster: Experiments with Tissue Lysate as a Therapeutic Agent. P. A. Maplestone and L. M. Ghosh.—p. 212.
Regional Ileitis. V. M. Kaikini.—p. 214.
Treatment of Splenomegaly by Injections of Milk. C. L. Pasricha and G. S. Chopra.—p. 218.
Modified Technic for Phrenic Evulsion. R. Viswanathan.—p. 220.

Rheumatic Infection in India.—In order to determine the incidence of rheumatic infection Mangalik and Stott reviewed the Thomason Hospital records for the years 1930-1936. During this period there were nine cases of acute rheumatic infection, giving an admission rate of 1.17 per thousand medical admissions. For every case of acute rheumatic infection admitted to the hospital during the period under review, fourteen cases of chronic valvular disease, mostly of mitral and of undoubted rheumatic origin, were admitted. One is justified in drawing the conclusion that the initial rheumatic infection in Indians is rarely fulminating and acute and rarely compels the patient to seek hospitalization; it probably has a slow, insidious course and onset—mostly vague pains in the body and joints and not severe enough to confine the patient to bed. The most common age for acute rheumatic infection is between 5 and 15 years. The most common age for the patient to seek hospital aid for cardiac disabilities connected with a chronic mitral valvular lesion is between the ages of 20 and 35. There is no definite distribution in the sex or caste of the patients, nor is the monthly admission rate of any great significance. Rheumatic nodules are rare. Acute rheumatic infection in India, with polysynovitis, carditis and chorea, though rare in the hospital-going class of Indians, is a definite clinical entity to be seen in India.

Journal of Laryngology and Otology, London

53: 283-354 (May) 1938

Otogenous Nonpurulent Encephalitis. E. Jerlang.—p. 283.
Observations on Variation in Hearing in Otosclerosis. S. Suggit.—p. 294.

Journal Obst. & Gynaec. of Brit. Empire, Manchester

45: 209-404 (April) 1938

Ectopic Pregnancy. N. P. Mahfouz.—p. 209.
*Fetal Mortality in the Offspring of Apparently Healthy Women. Mabel F. Potter.—p. 233.
Very Large Ovarian Cyst Removed by Enucleating it from Ovary ("Ovarian Cystectomy"). V. Bonney.—p. 250.
Enucleation of Bilateral Ovarian Cysts from a Young Nullipara. R. J. Kellar.—p. 252.
Gynandroblastoma of the Ovary. W. P. Plate.—p. 254.
Seminoma or Dysgerminoma of the Ovary. P. M. G. Russell.—p. 258.
Hydatidiform Mole: Statistical and Clinical Study. Probodh Chandra Das.—p. 265.
*Diagnosis of Intra-Uterine Death by a Spectrographic Method. O. V. Jones—p. 281.
Height of Anterior Shoulder and Its Relation to Position of Fetal Heart. N. A. Purandare.—p. 287.
Wet-Specimen Demonstration Frames for Teaching Purposes. K. V. Bailey.—p. 289.
*The Cycle of the Woman. J. Samuels.—p. 291.

Fetal Mortality in the Offspring of Healthy Women.—On the supposition that frequent abortions and stillbirths may be due to some endocrine abnormality, i. e., a deficiency or excess of essential hormones, Potter performed a series of Aschheim-Zondek tests on the urine of nineteen pregnant women who had previously been unable to carry a pregnancy to term, to see whether the reactions differed from the reactions obtained from the urine of normal pregnant patients. Although the urine of pregnant women who produced stillbirths and abortions frequently gave perfectly normal Aschheim-Zondek reactions, the results were definitely weaker than those with the urines of normal pregnant patients. The nineteen patients with a history of habitual stillbirth and abortion were placed on large oral doses (up to 18 grains, or 1.2 Gm., daily) of corpus luteum (progestin). Three of these cases ended in failure. There were six cases of threatened abortion in this series, in each of which the pregnancy was preserved. This series of cases of habitual stillbirths and abortions gives a high percentage of pregnancies successfully terminated, especially compared with what the same patients accomplished unaided by progestin. Without this treatment the nineteen patients had among them fifty-five pregnancies. Of these only eight were successful and forty-seven ended in failure. The same nineteen patients, under treatment with progestin, achieved success with sixteen pregnancies and only three failed. It is suggested that the factor in the corpus luteum responsible for these successes is probably different from the factor responsible for the structural changes of the endometrium preparatory to pregnancy. It is further suggested that theca lutein cells produce the hormone which inhibits uterine contractions and which probably remains potent if given orally.

Diagnosis of Intra-Uterine Death.—Jones outlines a spectrographic method of diagnosing intra-uterine death of the fetus. It is based on a specific spectroscopic change that can be demonstrated in the urine of women carrying a dead fetus. Pure estrogen was found to exhibit selective absorption, with a broad band having its maximal absorption in the ultraviolet near 281 millimicrons and a minimal about 260 millimicrons. Both theelin and theelol have almost identical absorption curves. Accordingly, the absorption intensity of all the estrogenic extracts was measured at 281 millimicrons. Extracts from urine of normal and abnormal pregnancy were obtained and after all the theelin and theelol were extracted (by means of the two technics) all were found to display a characteristic absorption band in the same region as that of pure estrogen. Procedure 1: A 200 to 300 cc. sample of urine of pregnancy, adjusted to p_H 1 to 2 with concentrated hydrochloric acid, is refluxed at 100 C. for three hours on a water bath. On completion of the hydrolysis of estrogenic complexes, the cold solution is extracted three times with 100 cc. of freshly redistilled ether. The ethereal extract is washed with sodium bicarbonate and water, the solvent is removed and replaced by 5 cc. of specially purified ethyl alcohol and its ultraviolet absorption determined, a 1 to 5 mm. cell being used. Procedure 2: The crude ethereal extract obtained as in procedure 1 is freed from ether, dissolved in toluene and reextracted with normal sodium hydroxide. After the extract is acidified with hydrochloric

acid it is again extracted with ether and examined as in the final stages of procedure 1. It is possible to diagnose intra-uterine death of the fetus by submitting the urinary extracts obtained by both preparative technics to spectrographic analysis. If the fetus is alive there will be an appreciable difference between the two estimations, whereas if the fetus is dead the two estimations will be approximately the same. Twelve patients examined spectrographically showed an absorption intensity from 6 to 18 (by both preparative procedures) considered to be characteristic of intra-uterine death of the fetus, and in each case the patient was subsequently delivered of a macerated fetus. In four other patients in whom intra-uterine death of the fetus was suspected the spectrographic examination of the urine suggested that the fetus was alive and the accuracy of this result was subsequently confirmed, as each pregnancy proceeded normally. In three cases of suspected intra-uterine death the results were misleading. Two of these patients were suffering from toxemia, while the third carried an anencephalic fetus. The hormone balance must be influenced by fetal abnormalities and, therefore, special caution must be exercised when one is applying this test to such patients. The author explains the spectrographic phenomenon by inferring that a substance absorbing in the same region as estrogen is absent, or greatly reduced in quantity, in the urine of women carrying a dead fetus. He is thus led to postulate the existence of a heretofore unrecognized hormone in the urine of a normal pregnancy, with apparently a definite role in normal gestation. Such a hypothesis implies that intra-uterine death of the fetus may be connected sometimes at least with a specific hormone deficiency or imbalance. This hormone imbalance may be either a cause of or a sequel to intra-uterine death. An attempt was made to isolate this unknown product, and ultimately it was traced to the toluene residues of the Marrian technic. From 20 liters of urine, treated in small batches, a few milligrams of the final product was obtained in a crystalline form. This x product showed selective absorption near 294 millimicrons and had a melting point in the region of 225 to 230 C., while its biologic reaction was estrogenic.

Cycle of the Woman.—Samuels points out that a sexually mature woman ovulates twice in each cycle, young nulliparas three times. The ripening of the second ovum suppresses the formation of the corpus luteum of the first ovum by means of hormone. Nidation takes place within three days after fertilization, as all early pregnancy cyclograms indicate. The surface cells of the endometrium die to the accompaniment of bleeding when there is a sudden change or withdrawal of hormone. These cells usually die as a result of the withdrawal of luteal hormone, but it is certain that a sudden cessation of the supply of folliculin can also cause this. Bleeding may also occur in the case of young girls during an ovulation as the result of a sudden and sharp decline in the curve. It may also occur when large quantities of folliculin are supplied to the endometrium and then suddenly withdrawn. A corpus luteum and luteal hormone are not essential to desquamation with bleeding. When the hormone changes are slow the endometrium can recover without bleeding. The mucous membrane is transformed by the second corpus luteum menstruale. Cyclograms tend to prove that in all probability predominating luteinizing hormone of the hypophysis may also incite the first suppressed corpus luteum to form luteal hormone after the second unfertilized ovum has died. The possibility of fertilization is greatest during the ovulation decline and the two to three days preceding it. On the third day after the beginning of the ovulation decline the possibility of fertilization is only slight; thereafter fertilization is impossible. A woman is absolutely sterile for three days after the second ovulation decline until from two to three days after menstruation begins. After this she is relatively sterile until three days before the first ovulation decline. The cyclogram accordingly serves as a guide in determining all processes of ovulation and conception and in diagnosing and treating irregularities of menstruation. The cycloscope (described in THE JOURNAL Feb. 26, 1938, page 696) will therefore prove to be an indispensable instrument not only for the gynecologist but also for all general practitioners.

Lancet, London

1: 925-976 (April 23) 1938

Some Deficiencies of Nutrition and Their Relation to Disease: II. Nutritional Deficiency in Relation to Anemia. C. C. Ungley.—p. 925.
Gonorrhea in Women and Children. Margaret Rorke.—p. 932.
*Observations on Cellular Basis of the Gordon Test for Lymphadenoma. D. G. F. Edward.—p. 936.
Effect of Nicotinic Acid on Pellagrins Maintained on a Pellagra-Producing Diet. Jean M. Grant, Elisabeth Zschiesche and T. D. Spies.—p. 939.
*Biologic Polyvalency of Antigens, with Special Reference to Hay Fever. J. Freeman and W. H. Hughes.—p. 941.
Diastolization in Catarrhal Conditions of Nose and Middle Ear in Children. A. Miller.—p. 943.

The Gordon Test in Lymphadenoma.—The discovery that an encephalitogenic agent was present in the lymph nodes from cases of lymphadenoma was first made by Gordon in 1932. In an effort to discover which type of cell contained the agent, Edward has carried out experiments using human cells and also the tissues from certain animals not tested previously. At the same time microscopic examinations have been made of the brains of the experimental animals and the histologic changes induced have proved a reliable test for the agent. It was found that the agent could be demonstrated in the mixtures of mature granular cells and myelocytes obtained from cases of myelocytic leukemia, but not in suspensions composed chiefly of myeloblasts. The one case of eosinophilia examined gave a strongly positive result. Weak positive results have also been obtained with lymphocytes; this is surprising, since suspensions of lymph nodes in lymphatic leukemia always give a negative biologic test (Gordon 1933). The presence of the agent has also been confirmed in pure suspensions of neutrophil leukocytes. No histologic differences have been found depending on the various sources of the agent. The condition of the affected animals during life is the same. The agent in lymphadenomatous glands has the same effect as that in leukocytes. In such diseases as myelocytic leukemia and myelosclerosis, in which there is infiltration of the lymph nodes with myeloid cells, these nodes give a positive test. In lymphadenoma granular cells are usually found in the lymph nodes, the eosinophils being the most conspicuous. If the biologic test in lymphadenoma depends on the cell content of the lymph nodes, its limitations are obvious when used as a diagnostic measure in a case of lymphadenopathy.

Biologic Polyvalence of Antigens.—Freeman and Hughes find that foreign grasses not grown to any extent in England give positive cutaneous reactions in people with hay fever who have not been exposed to them previously. Pollens of maize and bamboo could not be distinguished antigenically from the pollens of English grass. The pollen of sugar cane behaves in the same way as the pollen of English grass in the majority of cases. There is a slight antigenic difference between the pollen of sugar cane and the others, as a minority of the patients desensitized to timothy lost their reaction to sugar cane more slowly. Also three patients were found who were not sensitive to cane pollen but who were definitely sensitive to timothy. A comparison between the pollen of the gramineae and the pollen of garden flowers showed that such exotic "grasses" as maize, bamboo and sugar cane are far more closely related to the pollen of English grasses antigenically than to that of English garden flowers.

Medical Journal of Australia, Sydney

1: 683-720 (April 16) 1938

Maternity and Some of Its Problems. H. S. McLelland.—p. 687.
Refractometry and Concentration of Bile. W. J. Penfold and J. Sutherland.—p. 692.
Medical Organization with Mechanized Formations. C. G. Shaw.—p. 699.
Pituitary Gland and Carbohydrate Metabolism: II. Influence of Prolactin on Carbohydrate Metabolism. Charlotte M. Anderson.—p. 701.

Journal of Oriental Medicine, Mukden, Manchoukuo

28: 53-70 (April) 1938. Partial Index

Experimental Study of Influence of Methemoglobin Poison on Living Body. S. Nagazumi.—p. 53.
Significance of Blood Sugar During Sweat Secretion in Man. S. Ito.—p. 61.
Ice Sports Among School Children from Point of View of Sport Medicine. S. Ito.—p. 62.
Various Particles of Bacterial Cells and Practical Application of Staining of Granulae. T. Haschimoto.—p. 63.
Etiologic Study on Endemic Goiter in Jehol: II. Results of Animal Experiments. S. Suzuki.—p. 67.

Journal d'Urologie Médicale et Chirurgicale, Paris

45: 289-384 (April) 1938

*Results of Renal Decapsulation. H. Godard.—p. 289.
Autonephrectomy of Tuberculous Kidney: Case. G. Jasienski.—p. 306.
Suprapubic Incision of Empty Bladder. A. Diamantis.—p. 312.

Renal Decapsulation.—Godard reviews three cases in which bilateral decapsulation was performed. The first patient was a girl, aged 10 years, who became anuric following an appendectomy and in whom complete remission took place subsequent to decapsulation. At a second intervention, following recurrence three years later, lesions suggestive of chronic glomerular nephritis were observed. Remission occurred after the second operation also. The second patient was a girl, aged 5 years, who presented subacute glomerulonephritis marked by anuria. Death occurred shortly after decapsulation. The third patient was a girl, aged 3 years, who developed nephrosis marked by complete anuria, stomatitis, myosis and prostration, following accidental swallowing of mercuric oxycyanide. Death ensued forty-eight hours after decapsulation. These cases led the author to experiment on the effects of decapsulation on mercurial nephritis and on diuresis. Mercury was administered intravenously to five rabbits, which were then decapsulated. Three of them died, one two hours and two six days after operation. Of the survivors, one was killed ten days later and the kidneys were removed for microscopic study. Of five other rabbits that received mercury but were not decapsulated, three died within ten days and two recovered spontaneously. Accordingly, decapsulation did not benefit the poisoned animals. In another experiment with two rabbits, the volume of urine was measured before and after their decapsulation. The volume decreased temporarily immediately after operation; no appreciable polyuria or modifications of the urea concentration were observed. Since in the first patient a thick fibrous new growth was observed at the second intervention to have replaced the original capsule, the author decided to investigate possible similar formations in experimental animals. Late postoperative examination of decapsulated rabbits revealed neocapsular tissue thicker than the original in two animals, and fibrous layers of variable thickness in two others. Although a comprehensive study of the literature leaves the impression that decapsulation exerts a favorable influence on anuria, definitive therapeutic evaluation of the procedure should be approached with caution. There is the possibility that decapsulation in addition to its direct influence on the kidneys may elicit vascular and nervous reactions, owing to the release of proteolytic products in the operative field.

Revue Belge Sciences Médicales, Louvain

10: 89-176 (March) 1938

Coupled Punctures of Hemopoietic Centers in Diseases of Blood. P. Emile-Weil, P. Isch-Wall and S. Perlès.—p. 89.
*Indications for Surgical Treatment in Splenomegalies. R. Grégoire.—p. 103.
Classification of Purpuras. P. Chevallier.—p. 113.
*Action of Ascorbic Acid on Vascular Resistance: Influence of Mode of Administration. M. Adant.—p. 126.
Introductory Remarks to Pharmacodynamic Study of Hemostatics by Method of Correlation. J. Roskam.—p. 134.
Cervical Reticuloendotheliomas. N. Goormaghtigh.—p. 147.
Comparative Studies on Mycosis Fungoides and Hodgkin's Disease. S. Lapière.—p. 159.

Surgical Treatment in Splenomegalies.—Grégoire emphasizes that the results of splenectomy depend not so much on the surgical technic and on the skill of the surgeon, but rather on his ability properly to evaluate the indications and contraindications to the surgical treatment. Of the splenomegalies, he says that there are those which do not require operative treatment and those which do. The splenomegalies which do not require operation include the splenic hypertrophies of a tumoral nature, such as Gaucher's disease, Hodgkin's disease and leukemia. Aside from the splenectomies in which surgical treatment is dangerous or at least useless, there is another category in which surgery is not necessary. With this group, the author classes all those cases in which medical treatment suffices to affect cure or improvement; for instance, the splenic changes of syphilis, leishmaniasis, bilharziasis and malaria. On the other hand, in the presence of one of these splenomegalies of known cause, in which the medical treatment is of little influence, recourse to splenectomy may be necessary because of disorders in the blood, the vessels or the liver. Increase in size of the spleen, progressive anemia and hemorrhages are the chief indications for surgery. Before an operation is decided on it is important to determine the functional capacity of the liver. An irregular and hard liver with sharp outlines in a person with poor general condition must be regarded as a contraindication to the operation. The author refuses to perform an operation in cases in which the urea content of the blood is below a certain level. After the liver has been thoroughly examined for contraindications to surgical treatment, the vascular system should receive attention. Thrombosis of the portal vein and adhesions between the spleen and the walls of its bed are contraindications to splenectomy. Discussing 115 splenectomies performed by himself, he says that in the first fifteen operations he had an immediate mortality of 33 per cent. In the later cases the mortality fell to 7 per cent. As regards the late results of splenectomy for splenomegaly, he says that the hemorrhagic tendency is nearly the only danger that has to be feared. Of thirty-seven patients who were operated on, nine did not present hemorrhage, while the twenty-eight others had had hemorrhages before the operation, such as epistaxis and bleeding from the gums. Of the aforementioned nine patients, two had malarial hypertrophy, two had tumoral hypertrophy, one had kala-azar, one had leukemia and three had splenomegaly of unknown origin. The twenty-eight splenomegalies with considerable hemorrhages were for the most part of the type characterized by the presence of Gamna nodules. Of these twenty-eight patients, twenty-one remained free from hemorrhages, but the seven others had recurrences of hemorrhages. The late results of splenectomy are good, for the author observed 81 per cent of permanent cures. They were entirely free from those changes in the blood and in the capillaries which make the prognosis unfavorable.

Ascorbic Acid and Vascular Resistance.—According to Adant, the question of the relation of ascorbic acid to the vascular fragility is still a subject of controversy. Whereas some investigators observed that a diet in which the vitamin C supply is deficient produces an increase in the vascular fragility, others have been unable to corroborate this observation and could not detect a parallelism between vascular resistance and the ascorbic acid content of the blood. Since a review of the literature seemed to suggest that the mode of administration of ascorbic acid might be important, the author studied the influence of the intravenous injection and of the ingestion of ascorbic acid on the vascular resistance. The results obtained indicate that the mode of administration makes a difference in the action of ascorbic acid on the vessels. The intravenous injection of 100 mg. of ascorbic acid produces a rapid and strong but transitory augmentation of the vascular resistance. This action is exerted even in persons who are saturated with vitamin C. On the other hand, the ingestion of 300 mg. of ascorbic acid does not modify this resistance either in persons who are saturated with vitamin C or in those who have a vitamin C deficiency. Finally, if normal children, whose deficit does not exceed 2 Gm., are saturated with ascorbic acid by ingestion, the vascular resistance, measured on a day following the saturation, shows only a slight rise in five out of eighteen cases. This increase is too slight and too inconstant to be regarded with certainty as a consequence of the saturation.

Revue de Chirurgie, Paris

57: 85-170 (Feb.) 1938

*Nontuberculous Purulent Axillary Pleurisy. Clavelin and Sarroste.—p. 85.
Treatment of Closed Fractures of Two Bones of Leg: Statistics on Ninety-One Cases. Solcard and Badelon.—p. 113.
Epicondulitis Caused by Sports. J. Chavannaz and L. Marjou.—p. 126.
Relapses of Ulcers After Gastrectomies. H. Llucia.—p. 142.

Nontuberculous Purulent Axillary Pleurisy.—Clavelin and Sarroste report their observations on nine cases of purulent axillary pleurisy which they observed among a total of forty-nine nontuberculous pleural suppurations. They think that the anatomoclinical peculiarity of the localization, the relatively benign character and several diagnostic and therapeutic difficulties

of this process deserve emphasis. The disorder develops after an acute pneumopathy. It appears in two forms: the one chronic, aseptic, producing a low sound and often latent for long periods, a veritable roentgenologic discovery; the other one acute, usually due to streptococci and developing like a purulent pleurisy of the large cavity. The axillary localization of pleural suppurations appears after a limited cortical pulmonary focus. It is preceded by a phase of generalized pleural edema and it forms itself as the result of a defensive perifocal union of the pleural layers. The axillary pleurisy evolves afterward as a limited and closed pleural abscess until maturation. The older the process is, the thicker becomes the visceral pleura; in the chronic pleurisies it forms a shell which prevents absolutely all pulmonary expansion. The treatment of acute purulent axillary pleurisy consists in awaiting the period of maturation of the pleural abscess and in opening it at the sloping point by pleurotomy with costal resection. The sequels are slight, the results excellent. Chronic axillary pleurisy, on the other hand, justifies a thoracectomy, followed generally by pulmonary decortication. Although its evolution is less explosive than that of the acute form, its treatment is difficult and there frequently remain serious sequels.

Schweizerische medizinische Wochenschrift, Basel

68: 553-576 (May 14) 1938

Tasks and Aims of Geomedicine with Especial Consideration of Causes of Diseases. J. Eugster.—p. 553.
*Experiences with Protamine Zinc Insulin. G. B. Constam.—p. 556.
Therapy with Sulfanilamide Substances. A. Alder and N. Markoff.—p. 560.
Question of Types of Diphtheria Bacilli. Erika Wissler.—p. 561.
Treatment of Fractures of Fingers. A. Fonio.—p. 563.
Pathogenesis of Giant Growth of Fetuses on Basis of Birth of Two Giant Infants. E. Schulthess.—p. 563.
Problem of Harmfulness of Endonasally Administered Medicaments That Contain Oil. A. Marum and M. Kleissner.—p. 565.

Protamine Zinc Insulin.—Constam gives a brief history of the development of the insulin preparations with prolonged action and then evaluates his own experiences and those of others with protamine zinc insulin. He shows that although hypoglycemic manifestations are less frequent after the administration of protamine zinc insulin than after ordinary insulin, they are more difficult to detect and more serious in their course. On account of the danger of hypoglycemic manifestations it is inadvisable to give large doses of protamine zinc insulin to ambulatory patients. Great precaution is necessary in applying experiences and dosages on hospital patients to ambulatory patients. Moreover, protamine zinc insulin should be given only to those patients whose intelligence, character and occupation give assurance that the regulations of the administration will be strictly followed. The patients and the members of their families must be acquainted with the different prodromal signs of a hypoglycemic shock as well as with the measures to be taken. They must know how to arrange the diet and how to handle the insulin syringe. The insulin dosage must be strictly adjusted to the metabolic condition, and for this reason daily control of the urine is necessary. Before great exertions, the quantity of insulin should be reduced and the intake of carbohydrate increased. Protamine zinc insulin should never be given more than once in twenty-four hours. In many cases it will make possible a reduction in the number of injections or a concentration of the insulin injections to the morning hours. In the most severe and extremely labile cases it is often impossible to reduce the number of injections, but it may prove feasible to regulate the strong fluctuations in the blood sugar and to limit the hyperglycemia in the morning. For patients who for years have been well adjusted to treatment with ordinary insulin a change to protamine zinc insulin is inadvisable, because, as has been pointed out by Bertnard Smith, the regulatory mechanism of these patients has become completely adapted to the rapidly acting insulin. In conditions in which the insulin requirements change rapidly, such as injuries, intercurrent diseases and operations, ordinary insulin is used alone or in combination with protamine zinc insulin. The author concludes that the new insulin with the prolonged action has made the insulin therapy easier for many patients. However, the use of the new insulin has its limitations.

Annali Italiani di Chirurgia, Bologna

17: 137-220 (Feb.) 1938

*Microscopic Study of Gastric Walls Near Malignant Epithelial Tumors. E. Ruggieri.—p. 137.
Heteroplasty of Ureter: Experiments. C. Calef.—p. 153.
Differential Diagnosis Between Acute Appendicitis and Diseases of Upper Segment of Urinary Tract. G. S. Donati.—p. 173.
Pneumococcic Peritonitis: Clinical Study. E. Forti.—p. 195.

Microscopic Studies of Gastric Wall Near Cancer.—Ruggieri studied, microscopically, nineteen cases in which the cardiac segment of the gastric wall was removed in the course of gastric resection for cancer. The author found cancer cells in the layers of the gastric wall as far as 7 cm. from the macroscopic periphery of the tumor, and pathologic alterations of the tissues of the wall as far away as 9 or 10 cm. He therefore advises wide resection. It is important that care should be taken in making the sutures, as the tissues are extremely fragile and their powers of self reparation are diminished.

Lattante, Parma

9: 261-326 (May) 1938

*Gastric Chromoscopy with Neutral Red in Normal Infants and in Nutritional Disturbances in Infants. A. Ferro.—p. 269.
Infantile Acrodynia: Case. R. Dardani.—p. 291.
Syphilis in Mothers. M. Monacelli.—p. 295.

Gastric Chromoscopy in Infants.—Ferro studied the secretory functions of the stomach of fifty normal infants and of thirty who were suffering from nutritional disturbances by means of gastric chromoscopy and the chemical behavior of the gastric secretion in the course of the test. Most of the infants ranged in age from 1 month to 1 year. Only four in each group were older than 1 year. Chromoscopy was done during fasting, after administration of an intramuscular injection of 1 or 2 cc. of a 1 per cent solution of neutral red in sterile distilled water (according to the age and body weight of the infant). On appearance of the dye in the gastric secretion the infants were fed once on their original diet, whether natural, artificial or mixed. The gastric secretion was withdrawn before and thirty, sixty and 120 minutes after a feeding and the chemistry of the secretion was determined. The author found that the free and total acidity of the gastric secretion of fasting infants are low in the majority of cases. Hydrochloric acid appeared late in the gastric secretion after a feeding and in insufficient amount in thirty-five normal and in twenty-one infants with nutritional disturbances. The time of chromoscopy, which is the time which elapses between the injection and the appearance of the dye in the gastric secretion, varied between eight and twelve minutes in forty-five normal infants and between eleven and thirty-two minutes in eighteen patients. The dye failed to appear in the gastric secretion in five normal infants and in twelve patients. The age and the type of feeding, natural, artificial or mixed, did not have any influence on the results. The time of chromoscopy and the intensity of hydrochloric acidity were in relation to each other in only some of the cases of each group. The test was repeated after two weeks in eleven normal infants. The results were the same as those obtained in the first test in only three instances. The author concludes that chromoscopy can be easily and harmlessly used in infants but that it has no clinical value for secretory functions of the stomach. However, the results show that the secretory function of the gastric mucosa for dyes are diminished in nutritional disturbances in infants, as compared with those of normal infants.

Policlinico, Rome

45: 893-936 (May 9) 1938. Practical Section

Investigation of Method of Krumwiede and Nobel on Extraction of Precipitin Antigen from Bacteria. A. Alessandrini.—p. 893.
*Treatment of Malarial Splenomegaly by Epinephrine (Ascoli's Method). S. Livierato.—p. 899.
Leptomeningeal Hemorrhage in Young Woman: Case. G. Dalla Torre.—p. 904.

Epinephrine in Malarial Splenomegaly.—Ascoli's treatment for malaria was reported in THE JOURNAL May 8, 1937, page 1665. It consists in intravenous injections of progressively increasing doses of epinephrine, which are administered daily until thirty injections have been given. Livierato treated seven

adults presenting malaria of the daily, tertian and irregular types of from two to fourteen years' duration. There was intense splenomegaly and anemia in all cases and the patients were in poor general condition. Treatment was discontinued by two of the patients. Treatment gave satisfactory results in the other five cases. The author thinks that the treatment is harmless. In some cases there is a transient intolerance but treatment can be continued without interruption. While the treatment is being taken the appetite and general condition of the patients improve, weight increases, the malarial skin tinge disappears, the blood improves and splenomegaly is progressively reduced. In the group of patients observed by the author at the end of the treatment the weight of the patients increased from 4 to 9 Kg., erythrocytes increased from 1,000,000 before treatment to 2,500,000 per cubic millimeter of blood after treatment. Hemoglobin increased from 20 to 40 per cent. The results of the treatment are permanent.

Semana Médica, Buenos Aires

45: 897-952 (April 28) 1938. Partial Index

*Study and Treatment of Hereditary-Familial Neurologic Diseases with Predominant Lesions at Spinal Cord. R. Soto Romay.—p. 897.
Some Characteristics of Enlargement of Right and Left Ventricles. P. Cossio and R. Dambrosi.—p. 929.
Acute Postoperative Dilatation of Stomach. J. E. Igarzábal.—p. 936.
Embolism from Intramuscular Injection of Substances in Oil. I. R. Steinberg.—p. 945.

Hereditary Neurologic Diseases.—Soto Romay states that the various hereditary familial neurologic diseases with predominant lesions at the spinal cord are clinical forms of a process of degeneration of certain segments of the nervous system. The group of familial neurologic diseases with lesions of the spinal cord have many common symptoms and analogous anatomopathologic lesions. The author states that there are atypical and transitional forms between familial spasmodic paraplegia, progressive amyotrophy of Charcot-Marie type and Friedreich's hereditary ataxia. In the course of the disease the patients may show transformation of one type to another or the association of two or more atypical forms of the disease. The author reports three cases, in a mother and her two children. The three patients suffered from a combined form of spasmodic paraplegia, progressive amyotrophy and hereditary ataxia. In all three the factor of heredity and infection existed. The amyotrophy of the distal part of the legs as well as of the feet and hands was severe in the mother and in the oldest son, aged 13 years. The disease was of slow evolution in the mother, acute in the son and latent in the daughter, aged 7 years. The microscopic study of the amyotrophic muscle, which was taken by a biopsy, showed waxy degeneration of the muscular fibers, with loss of striation. There were proliferation of the sarcolemma nuclei, perivascular infiltration and proliferation of the interstitial tissue. The author reports satisfactory results of a combined treatment of vitamins and liver extracts. The evolution of the disease stopped and the patients gained some muscular force and control of the nervous symptoms. The author calls attention to the diagnostic value and significance of the contralateral Schaeffer sign, which is positive in acute hereditary neurologic diseases and shows involvement of the pyramidal segment. It was positive in the author's male patient.

Deutsche Zeitschrift für Chirurgie, Berlin

250: 89-262 (April 12) 1938. Partial Index

Studies on Electrocoagulation of Bones and Joints. H. Zschau.—p. 89.
*Rare Types of Abdominal Grip. H. Uebermuth.—p. 149.
Vegetative Innervation of Synovial Membrane of Human Knee Joint. P. Sunder-Plassmann and K. Daubenspeck.—p. 158.
Thyroid and Vitamin B_1. E. Schneider.—p. 167.
Diagnostic Significance of Displacement of Pineal Body in Alterations of Intracranial Pressure. M. Ernst.—p. 224.
*Chronic Mastopathy Newly Considered. R. Wanke.—p. 234.

Abdominal Grip.—Uebermuth observed, in the course of a grip epidemic in the beginning of 1937, occasional cases of what he considered primary grip peritonitis. The observations in his own three cases and the review of recent literature suggest that primary grip infection of the peritoneum is a definite entity presenting a fairly characteristic picture. The disease begins with vomiting, diarrhea, tenderness in the left lower half of the abdomen, distention, arrest of fecal current and flatus, dry tongue, fast pulse and fever. A laparotomy reveals a diffuse peritonitis with a proffuse greenish-yellow slimy and entirely odorless exudate. Cultures from the exudate fail to reveal influenza bacilli. In one of the author's cases the cultures were entirely negative and in two hemolytic streptococci were grown. The intestinal loops are red, those of the terminal ileum presenting grayish-whitish deposits and areas of bluish-black discolorations due to subserous hemorrhages. The rest of the viscera show nothing of importance. There is in the beginning a leukopenia. The mode of infection may be hematogenous or enterogenous, with the point of origin in enteritis of the terminal ileum. The former type offers a worse prognosis.

Chronic Mastopathy.—According to Wanke, statistical studies show that the incidence of chronic mastopathy in unmarried women is no greater than in the married women. His own observations suggest that the neglect of a "natural function" is not the cause of the disease. Likewise not much, if any, pathogenic importance can be attached to too frequent functional activity of the breasts in oft repeated pregnancies and nursing, as is evident from the fact that women who have borne many children are seldom subject to this disease. The fecundity of women with mastopathy is only slightly inferior to that of women with normal breasts. Investigations thus far have thrown little light on the question of the fertility of a woman who has had mastopathy, although the author's personal observations suggest that women who have had mastopathy at the age of 30 or later are less likely to have children. Quantitative determinations of the excretion of the estrogenic substance in the urine of two patients demonstrated a striking diminution with a reversal of the normal curve, thus pointing to a profound disturbance in the estrogenic substance economy as the cause of the mastopathy. The condition bears a resemblance to gynecologic disorders only so far as the latter present the evidence of certain functional alterations of a vegetative kind (hypoplasia of the genitalia). The author stresses the fact that a simultaneous glandular cystic hyperplasia of the endometrium was never observed—further evidence that this condition is likewise caused by a disturbance of the estrogenic substance economy, in this instance of too much hormone. The treatment of mastopathy is determined primarily by the differential diagnosis based on the results of biopsy. Endocrine therapy brought about remarkable results in some and encouraging results in all the author's cases. Chronic mastopathy develops in all probability on the basis of ovarian insufficiency.

Klinische Wochenschrift, Berlin

17: 649-688 (May 7) 1938. Partial Index

Nonspecific Action of Hormone of Male Gonad. W. H. Veil and O. Lippross.—p. 655.
Influence of Prolonged Oral Administration of Small Quantities of Estrogenic Substance on Adrenals. M. Danner.—p. 658.
*New Test for Qualitative and Quantitative Demonstration of Corpus Luteum Hormone. J. H. Duyvené de Wit.—p. 660.
Acid Covering of Skin and Bacterial Defense: Regional Differences in Hydrogen Ion Concentration of Surface of Skin. A. Marchionini and W. Hausknecht.—p. 663.
Influence of Strychnine Irritation on Acetylcholin Content of Nervous System and Abolishment of Irritation by Dial-Anesthesia. J. Fegler, H. Kowarzyk and Z. Lelusz-Lachowicz.—p. 667.

Test for Corpus Luteum Hormone.—Duyvené de Wit points out that formerly the corpus luteum hormone was demonstrated by means of the changes it elicits on the uterine mucosa of rabbits during apparent pregnancy. The two test methods most widely used for this purpose were those of Allen-Corner and of Clauberg. However, these tests have the disadvantage that they require a comparatively long time (six days) and detect only comparatively large quantities of hormone. The author, having observed that the female minnow is highly sensitive to the corpus luteum hormone (progesterone), decided to use minnows as a test subject. He found that the ovipositor of minnows shows an increase in length after a comparatively small quantity of progesterone has been added to the water of the aquarium containing the minnows. The growth persists for from five to seven hours and is macroscopically visible. Within certain limits the growth of the ovipositor is proportional to the amount of hormone added. Thus the test makes possible the quantitative demonstration of progesterone. It detects

quantities as small as from 10 to 20 micrograms. The test is not only rapid but also economical. The minnows can be used repeatedly. Discussing the specificity of the test, the author says that the growth of the ovipositor in minnows has been used as a test for other sex hormones for those of the estrogenic type and for those of the androsterone group. Between the time that the hormone is introduced into the aquarium and the onset of the growth of the ovipositor, a certain time elapses. This time is designated as the latent period. If hormones of the estrogenic type are added the latent period is ten or twelve hours, but if hormones of the androsterone or progesterone group are added the latent period is one hour. It is important that fifty times more androsterone than progesterone is required to produce the same reaction. The author also gives a definition of the ovipositor unit; it is equal to one eighth of the distance between the insertion and the terminal rim of the extended organ.

Medizinische Klinik, Berlin

493-528 (April 14) 1938. Partial Index

When Does Fibrous-Caseous Pulmonary Tuberculosis Require Institutional Care? K. Schuberth.—p. 496.
*Formation of Adhesions Following Pleurisy with Effusion. P. Leifer.—p. 498.
Tuberculin Sensitivity in Rheumatic Disorders. O. Chiari and R. Matricardi.—p. 500.
Acrocephalosyndactylia: Case. O. Sittig and K. O. Baumruck.—p. 502.

Adhesions Following Pleurisy with Effusion.—Leifer discusses the correspondence between the type of inflammatory processes in pleurisy with effusion, of tuberculous origin, and the extent of the adhesions formed. The more severe the pleuritic inflammations the more copious the effusion, and the longer the latter remains within the cavity the more it becomes inspissated until fibrinous layers, the foundation of adhesions, are formed. If the tuberculous foci are present in the pleura the inflammatory and effusive processes will be greatest; if the influence is less direct (through bronchial pneumonia or the bronchial lymph nodes) the pleurisy will be less severe. The author does not agree with Illig and others that the formation of adhesions has a favorable immunobiologic influence on the tuberculosis and is not to be combated. Adhesions may have definitely unfavorable consequences: circulation may be impaired by the unilateral constriction of the thoracic organs, the crippled lung may show greater susceptibility to bronchopneumonia, and the presence of adhesions may make it impossible to perform a needed pneumothorax. Formation of adhesions is best minimized by frequent punctures which counteract the tendency of long standing effusion to thicken into fibrinous layers. The author made clinical and roentgen follow-up studies in fifty of 150 cases in which repeated punctures were done. Slight adhesions had formed in forty-one cases, adhesions were almost completely lacking in four and they were extensive in only five. The author concludes that repeated puncture, even if it cannot prevent adhesions, can limit their extent.

Skandinavisches Archiv für Physiologie, Berlin

78: 249-312 (March) 1938

Transformation of N-Prophyl and N-Butyl Alcohols in Organism: Remarks on Products of Oxidation of Alcohols in Bichromate-Sulfuric Acid Mixture. S. M. Berggren.—p. 249.
Observations on Increased Resistance in Mated Animals to Toxic Agents. E. Agduhr.—p. 259.
Disturbance of Fat Metabolism Under Influence of Estrone: A Tumorous Fat Accumulation in Parametrium Experimentally Produced by Treatment with Estrone on Castrated Guinea Pigs. T. P. Störtebecker.—p. 268.
Hibernation of Hedgehog: Vitamin C Content of Some Organs. P. Suomalainen.—p. 272.
Influence of Static Muscular Work on Respiration and Circulation. E. Asmussen and E. Hansen.—p. 283.
*Fluctuations in Creatine and Creatinine Content of Blood During Athletic Training. P. Backman, V. Pirilä, T. Raekallio and I. Väänänen.—p. 304.

Creatine and Creatinine During Athletic Training.—Backman and his associates describe studies on the fluctuations in the creatine and creatinine content of the blood of four persons who underwent intensive training, which involved great muscular exertion. It was observed that, as regards the creatinine balance, the four persons represent two different types: In two (B and D) the creatine balance was sensitive, for it reacted rapidly and strongly; whereas in the two others (A and C) it was more stable, so that the changes were weaker and slower. The authors think that this difference might be related to the difference in the body structure, for A and C were strong bodied, whereas B and D were of a rather slight build. In all four persons, a wavelike periodic fluctuation could be observed in the basic value of the total creatinine. In the two persons of the first type the periods were short; in those of the second type they were long. In the persons of the first type there were periodic changes also in the basic value of creatine; the direction of the change (increase or decrease) was the same as in the basic value of the total creatinine, so that fluctuations in the total creatinine were determined chiefly by the fluctuations in creatine, whereas the basic value of creatinine showed only few quantitative changes. In the second type of person the basic values of the creatine as well as of the creatinine changes without continuity. The basic value of the total creatinine reached its maximum rapidly in the persons of the first type but after a prolonged rest in the persons of the second type. In the persons of the first type its value was considerably higher before the beginning of the training than was the case in persons of the second type. In all four persons (more in the first than in the second type) the total creatinine and creatine values decreased during the individual exertion when the basic values were on the increase and they increased when the opposite was the case.

Zeitschrift f. Geburtshülfe u. Gynäkologie, Berlin

117: 1-176 (April 29) 1938

Malignant Chorionepithelioma. H. Heuck and R. Hanser.—p. 1.
Relations Between Growth of Cancer and Incretory Milieu: Biologic Investigations on Spontaneous and Inoculated Tumors of Mice. H. Baatz.—p. 64.
Results of Surgical Treatment of Descent and Prolapse of Female Genitalia. K. Hollstein.—p. 86.
Interstitial Tubal Pregnancy. H. Huber.—p. 94.
Edemas in the Newborn. H. Volz.—p. 131.
*Ascorbic Acid Content of Human Milk During Summer and Winter. H. Winkler and E. Heins.—p. 148.

Ascorbic Acid Content of Human Milk.—Following a review of reports in the literature on the vitamin C requirements of nursing mothers and their nurslings, Winkler and Heins report their own investigations on the seasonal fluctuations of the ascorbic acid content of human milk. Summarizing their observations, they say that the ascorbic acid (vitamin C) content of human milk increases from the first to the fourth or fifth day of the puerperal period, parallel to the transformation of colostrum into milk, colostrum having lower ascorbic acid values than does milk. During the remainder of the puerperium, the ascorbic acid value stays the same. In the course of the summer months it remains at about the same level regardless of a prolonged lactation. The ascorbic acid content of breast milk during the summer months was found to be between 4.6 and 6.6 mg. per hundred cubic centimeters. Usually the values were around 5.7 mg. per hundred cubic centimeters. The winter values were about one third lower than the summer values. They fluctuated between 2.9 and 5.2 mg. per hundred cubic centimeters. The mean was 4.1 mg. per hundred cubic centimeters. By the parenteral administration of ascorbic acid to nursing mothers, it was possible to increase the ascorbic acid content of their milk to 9 or 10 mg. per hundred cubic centimeters. This increase was induced more readily during the summer than during the winter. After the parenteral administration of ascorbic acid was discontinued, its content in the milk gradually decreased. During the winter months, the authors observed a deficit of vitamin C in nursing mothers which was not present during the summer months. They think that the presence or absence and the extent of the vitamin C deficit is largely dependent on the diet and on the season. This also explains the difference in results obtained by various investigators. They recommend that during the winter (November to April) pregnant and nursing women should receive vitamin C in addition to their food, so as to avoid a C hypovitaminosis. During the summer months (May to October), however, the vitamin C requirements will usually be met by a suitable diet.

Zentralblatt für Chirurgie, Leipzig

65: 897-1024 (April 23) 1938. Partial Index

Disturbances After Stomach Resection. N. Guleke.—p. 898.
Injuries to Upper End of Radius. G. Magnus.—p. 904.
Retromediastinal Struma. H. von Haberer.—p. 906.
*Fibroplastic Appendicitis, Chronic Stenosing Terminal Ileitis and Nonspecific Inflammatory Ileocecal Tumors. A. Läwen.—p. 911.
Results in Endarteritis Obliterans After Resection of Sympathetic Nerve and Ganglions. W. Röpke.—p. 916.
Effect of Pancreas on Mortality of Operations on Biliary Tracts. F. Bernhard.—p. 920.

Appendicitis, Ileitis and Inflammatory Ileocecal Tumors.—Läwen states that microscopic features of the entity he described in 1914 under the name of fibroplastic appendicitis are identical with those of terminal ileitis described in 1932 by Crohn, Ginzberg and Oppenheimer. He had stated in his description that fibroplastic appendicitis may involve the cecal wall and the terminal portion of the ileum and thus lead to a secondary terminal ileitis. The extensive literature on the subject of the etiologic relationship of the appendix to terminal ileitis permits the separation of the patients into three groups. In group 1 belong patients presenting at operation a terminal ileitis without the involvement of the appendix. In group 2 belong patients in whom the appendix had been removed a shorter or a longer time before the operation and in some of whom at least the appendix could not have been the primary cause. In group 3 belong patients in whom there are found inflammatory changes in the appendix in the course of an operation for chronic stenosing terminal ileitis. These alterations, however, not infrequently give the impression of being secondary rather than primary. The author concludes that the tumor forming chronic stenosing ulcerative or nonulcerative terminal ileitis and fibroplastic appendicitis and the analogous disorders of the ascending colon present an identical microscopic picture. They represent the same type of inflammation with a different primary localization. In a number of cases the relationship between terminal ileitis and the inflammation of the appendix cannot be demonstrated. There are cases of ileitis in which it is possible to establish the etiologic relationship to an acute appendicitis and a chronic terminal ileitis which had developed at a later period. A primary ileitis may involve the cecal wall, its mesentery and the appendix itself. The fibroplastic disease of the intestinal wall developing from the intestinal mucosa and involving the terminal ileum, the cecum and the ascending colon and giving rise to typical clinical entities is probably the same process as diverticulitis described by Graser, the postoperative chronic inflammatory tumors of the omentum described by Braun, the abdominal wall tumor described by Schloffer and possibly the peculiar, nonspecific chronic fibrous encapsulating peritonitis.

Zentralblatt für Gynäkologie, Leipzig

62: 849-896 (April 16) 1938

*Diagnosis of Ovarian Dysfunction by Streak Curettage. K. H. Sommer.—p. 850.
Spastic Parametropathia with Spastic Constipation. M. Rodecurt.—p. 859.
*Relations Between Ocular Tension and Pregnancy. P. Patat.—p. 868.
Menarche and Lactation. Emma Vittali.—p. 873.
New Device for Continuous Vaginal Irrigation. F. Hoff.—p. 876.

Diagnosis of Ovarian Dysfunction.—After pointing out that the great value of the microscopic examination of the endometrium of patients with ovarian dysfunction has been recognized by a number of authorities, Sommer cites some of the methods that have been recommended for this purpose. He says that at the clinics in Kiel and in Leipzig the so-called streak curettage has been found helpful. Reifferscheid uses a special streak curet, but the author simply uses a small curet. The procedure can be made without anesthesia. It requires merely a dilation up to Hegar 6. The curet is pushed up to the fundus, is pressed lightly against the anterior uterine wall and is drawn downward. Observations in the clinic and during ambulatory consultations revealed that even the repeated application of the streak curettage involves no injury to the patient. On the basis of case histories the author shows that the streak curettage provides valuable information about the ovarian function and thus helps in deciding the best treatment and in forecasting the probable outcome of the disorder. He emphasizes, however, that for the determination of the presence or absence of a malignant tumor the streak curettage is inadequate.

Ocular Tension and Pregnancy.—Patat says that in a previous report (two years ago) he and his collaborator related observations on 151 cases in which studies were made during the different phases of pregnancy, delivery and the puerperium. Comparative tests on nonpregnant women of the same age revealed that the ocular tension of pregnant, parturient and puerperal women is usually reduced. In those women in whom the values were definitely reduced during pregnancy, the author renewed the test one or two years after delivery. In this paper he gives a tabular report of twenty-seven women who were reexamined. The table clearly demonstrates that the ocular tension of the same person is usually lower during the processes of gestration than is the case one or two years after delivery. Discussing the possible cause of the ocular hypotension during pregnancy, the author suggests first that the acidosis of pregnancy might play a part, pointing out that a lowered ocular tension has been observed during other processes that are accompanied by acidosis, such as diabetic coma. Other factors that might be involved are reduction in the osmotic pressure, chemical changes in the blood or changes in the endocrine function. A complete explanation has not been found as yet.

Wiener Archiv für innere Medizin, Vienna

32: 159-214 (April 30) 1938

Studies on Objective Factors of Hunger and Satiety. J. Monauni.—p. 159.
*Hypophysis and Water Exchange. P. Wermer.—p. 189.

Hypophysis and Water Exchange.—Wermer discusses recent advances in the knowledge of the pathogenesis of diabetes insipidus, giving special attention to the significance of the anterior lobe of the hypophysis in the pathology and physiology of the water exchange. After pointing out that the significance of the anterior hypophysis in diabetes insipidus was indicated two decades ago by the observations of von Hann, he cites recent observations, particularly by American authors, which likewise indicate that the anterior lobe of the hypophysis does play a part. On the basis of these reports in the literature and of his own experiments and observations, he reaches the conclusion that a substance with strong diuretic action can be extracted from the anterior lobe of the hypophysis. This substance is contained in that fraction which also contains the growth hormone. There are two types of diabetes insipidus: that caused primarily by the posterior lobe of the hypophysis and that caused by the anterior lobe of the hypophysis. In both types there exists a disproportion between the diuretic hormone of the anterior lobe of the hypophysis and the antidiuretic hormone of the posterior lobe of the hypophysis. The deficiency in secretion of the posterior lobe of the hypophysis may be caused by a destruction of the posterior lobe or by an impairment of its innervation. An excess of hormone of the anterior lobe of the hypophysis may be caused by a basophil adenoma or during pregnancy by a transformation of the hypophysis which is elicited by the genital glands. Destruction of the anterior lobe of the hypophysis in the presence of an unimpaired posterior lobe produces oliguria; however, if it is accompanied by destruction of the posterior lobe, the development of diabetes insipidus is prevented.

Vrachebnoe Delo, Kharkov

20: 177-240 (No. 3) 1938. Partial Index

General Laws in Neurology of Infections. A. T. Geymanovich.—p. 181.
Symptomatology of Acute Myelosis. A. N. Sokolov.—p. 191.
Symptomatology of Grave Anemias. M. K. Bukshpan.—p. 195.
*Aplastic Anemias. G. A. Rakochi.—p. 197.
Symptomatology of Essential Thrombopenia. F. P. Patushinskaya.—p. 207.
Chemotherapy of Sepsis. L. I. Gefter.—p. 209.

Aplastic Anemias.—The great majority of blood diseases may be regarded, according to Rakochi, as a reaction on the part of the hemopoietic organs to various irritants. Pernicious anemia is one of the types of reactive processes. Sepsis not infrequently appears to be the cause of such reactions, capable of producing alterations in the blood resembling those of per-

nicious anemia. Such cases are to be regarded as a syndrome of pernicious anemia accompanying sepsis. As is well known, liver therapy is most effective in this type of anemia. Its effect in other pernicious anemia syndromes is not nearly so reliable. There exist a number of syndromes of pernicious anemia with known etiology, such as anemia of pregnancy, of helminthiasis or of sepsis. Pernicious anemia may run its course as a regenerative type, either hypoplastic or aplastic. Aplastic anemia may begin as such or it may develop from a regenerating type. The etiologic factors are variable, sepsis being among the more frequent. Hemolytic processes may be present or absent, depending on the etiologic causes. The author regards aleukia as a general concept. Various etiologic factors may give rise to a typical picture of aleukia; among these sepsis is a frequent cause. Cases of aleukia associated with the involvement of erythropoiesis belong in the group of aplastic pernicious anemias.

20: 241-320 (No. 4) 1938. Partial Index

Latest Clinical Data Regarding Vitamins. B. A. Egorov.—p. 249.
Role of Sodium in Development of Edema. S. D. Reyselman.—p. 255.
Parallel Studies of Gastric Contents with Thick Tube and by Fractional Thin Sound. M. I. Khurgin and A. Ya. Reznik.—p. 261.
*Nathan's Reaction in Tuberculosis. T. V. Braginskaya.—p. 265.
Bilirubin Reaction of Blood of Healthy Persons and of Those with Hepatic Disease as Influenced by Diathermy. A. G. Martynuk.—p. 269.
Rheumatism and Cardiac Invalidism. I. B. Katsnelson and K. B. Kheyfets.—p. 271.

Nathan's Reaction in Tuberculosis.—Braginskaya reports results with the use of a test proposed by Nathan and Kallos in 1931. The technic of the test is as follows: A piece of gauze 1 cm. in diameter was moistened in old tuberculin and applied to the healthy skin on the flexor surface of the forearm. The edges were secured to the skin by some adhesive substance. Clear bouillon was used for control. The dressing was removed twenty-four hours later and the reaction was observed for the next five or six days. When positive, the typical reaction is characterized by the appearance of small vesicopapular lesions on a normal or somewhat hyperemic base. The lesions begin to disappear from two to three days later. On the basis of experience in 184 patients, the author concludes that the reaction of Nathan may be included among the sensitive and specific reactions in tuberculosis. Both general and focal reactions were absent. Positive reaction was observed in active cases only. The reaction is more pronounced and its incidence is greater in cases of tuberculosis of the skin, although it gives a considerable percentage of positive reactions in tuberculosis of other systems. The experience of the author is not in agreement with the conclusions of Nathan and Kallos, who consider that the test has a selective affinity for tuberculosis of the skin. The test in children does not differ from that in adults. The reaction may be negative in grave cases of tuberculosis accompanied by marked exhaustion, as well as in the stage of recovery.

Nederlandsch Tijdschrift v. Geneeskunde, Amsterdam

82: 2001-2092 (April 23) 1938. Partial Index

Experiences with Peg Treatment in Median Fracture of Neck of Femur wth Aid of Direction Appartus of Valls. I. Boerema.—p. 2009.
Measurement of Diameter of Erythrocytes and Standardization of Apparatus of Pijper. E. P. Snijders and T. Kiem Bok.—p. 2018.
*Fever Therapy of Gonorrheal Conjunctivitis by Means of Intravenous Injection of Cholera-Typhoid Vaccine. H. G. Hofstee.—p. 2028.

Therapy of Gonorrheal Conjunctivitis.—Hofstee says that whereas in the Netherlands gonorrheal conjunctivitis is practically disappearing, the condition is still comparatively frequent in the Dutch East Indies. He discusses observations on patients with gonorrheal conjunctivitis who came for treatment to the Wilhelmina Hospital in Bandung (Java). The material comprises in all about 900 eyes that were treated in the years between 1929 and 1936. The majority of patients were adults, but there was also a considerable number of infants with gonorrheal conjunctivitis. The treatment consisted in intravenous injections of 0.1 cc. of cholera-typhoid vaccine or in intramuscular injections of milk or in measures such as irrigations with solution of potassium permanganate and treatment with silver nitrate. Approximately 50 per cent of the patients with gonorrheal conjunctivitis had a more or less severe involvement of the cornea. The author thinks that this is partly due to the fact that the patients are hospitalized rather late, and partly to the poor condition of the cornea as the result of mixed infections (trachoma) and (latent) A avitaminosis. Discussing the efficacy of the different treatments, the author says that the injections of cholera-typhoid vaccine effect cure on the average in nine days, the milk injections in eleven days and the other measures in twelve days. He thinks that the intravenous injection of typhoid-cholera vaccine is the best form of fever therapy for gonorrheal conjunctivitis.

Hospitalstidende, Copenhagen

81: 89-116 (Jan. 25) 1938

Case of Cancer and Tuberculosis in Same Patient. P. Møller.—p. 89.
*Schmorl's Nodules. K. Overgaard.—p. 102.
Digitalis Bradycardia and Blood Pressure. N. A. Nielsen.—p. 111.

Schmorl's Nodules.—Overgaard says that while Schmorl's nodules, often seen in roentgenograms, usually give no symptoms, closer attention to their eventual clinical significance is desirable. The disorder may presumably cause subjective symptoms and may play a part in the development of a deforming spondylitis and probably also in the development of a kyphosis of adolescence (Scheuermann's disease).

81: 145-172 (Feb. 8) 1938

*Review of Recent Research on Leukosis. J. Engelbreth-Holm.—p. 145.
*Nervous Complications in Epidemic Parotitis: Meningoradiculitis Basalis Parotidea. K. G. Fuhrmann.—p. 159.
Recurrent Colic After Gallstone Operations. S. Müller.—p. 168.

Leukosis.—According to Engelbreth-Holm, investigators agree that leukoses in animals, especially in chickens and mice, are analogous to leukoses in man and that leukoses are to be regarded as tumor formations. The observation of several cases of lymphatic leukoses in closely related persons suggests the possible presence of a hereditary constitutional factor. Investigations in inbred mice clearly show hereditary factors to be most important in the origin of leukoses in animals. The receptivity of mice to implanted leukoses depends on hereditary factors transmitted as a dominant chacteristic; the occurrence of spontaneous leukoses depends in part on hereditary dispositions of a far more complicated kind and does not depend on a dominant characteristic. The author states that while leukoses, at all events those with a rapid course, have by some been assumed to be due to infection, undoubtedly a complicating secondary infection often sets in in true leukoses with a rapid course; a positive result on cultivation of bacteria from the blood affords no evidence as to the infectious nature of leukoses. At present the theory of a virus as the cause of leukoses in mammals is considered one of the most plausible theories, but it is not established. Investigations have shown that the tumor-producing viruses are not independently living organisms. The greater frequency of leukoses in man in winter than in summer has not yet been explained, and similar unexplained conditions prevail in chicken leukoses. While recent investigations have given the clinic new and valuable adjuvants for the diagnosis of leukoses, therapy continues to be only palliative. Stephens and Lawrence propose treatment with doses of arsenic, increasing to beginning intoxication and then with continued subtoxic doses. There is no recent confirmation of the reported improvement on treatment with ascorbic acid. Irradiation does not prolong the patient's life but leads to significant improvement in the condition.

Epidemic Parotitis.—In Fuhrmann's case the epidemic parotitis was accompanied by a defined meningitic lesion localized to the base of the cerebrum. He advises neurologic examination in all infections which often give benign meningitis. In later neurodisturbances the history then allows establishment of the pathogenesis in radiculomeningitis and circumscribed serous meningitis and perhaps also in the frequent cases of "changes in the spinal fluid," in which the subjective symptoms do not point to the nervous system or merely suggest the clinical picture of "neurasthenia" or "slight depression," and the most careful objective examination reveals no sign of organic nervous disorder. Because of the tendency in epidemic parotitis to nervous complications, especially benign, often latent meningitis, he would advise examination of the spinal fluid in every case of epidemic parotitis.